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MONTH. **JANUARY, 1857.** 31 DAYS.

OON'S IASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTI-MORE. H. M.	CHARLES-TON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
t Quar.	3	7 30 mo.	7 18 mo.	7 8 mo.	6 54 mo.	1	12 4 4
Moon.	10	4 24 mo.	4 12 mo.	4 2 mo.	3 48 mo.	9	12 7 36
d Qr.	17	0 6 mo.	11 54 ev.	11 44 ev.	11 30 ev.	17	12 10 32
Moon.	25	6 42 ev.	6 30 ev.	6 20 ev.	6 6 ev.	25	12 12 44

		CALENDAR FOR N. YORK CITY; Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
Days of Week.	Sun's decl. S.	SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
	° ′ ″	H. M.	H M.	H. M.	H. M.	H. M.	H M.	H. M.
T	22 58 39	7 25	4 43	10 45	morn	7 19	4 49	10 24
F	22 53 12	7 25	4 44	11 55	0 39	7 19	4 50	11 34
S	22 47 19	7 25	4 45	morn	1 25	7 19	4 51	morn
S	22 41 0	7 25	4 46	1 8	2 15	7 19	4 52	0 46
M	22 34 14	7 25	4 46	2 24	3 11	7 19	4 52	1 56
T	22 26 59	7 25	4 47	3 40	4 18	7 19	4 53	3 10
W	22 19 19	7 25	4 48	4 56	5 27	7 19	4 54	4 25
T	22 11 14	7 25	4 49	6 8	6 42	7 19	4 55	5 36
F	22 2 41	7 25	4 50	7 11	7 48	7 19	4 56	6 42
S	21 53 43	7 24	4 51	rises	8 46	7 19	4 57	rises
S	21 44 20	7 24	4 52	6 19	9 35	7 18	4 58	6 38
M	21 34 31	7 24	4 53	7 28	10 19	7 18	4 59	7 34
T	21 24 17	7 23	4 54	8 33	11 1	7 18	5 0	8 48
W	21 13 37	7 23	4 55	9 36	11 40	7 17	5 1	9 48
T	21 2 35	7 22	4 57	10 36	ev 17	7 17	5 2	10 47
F	20 51 8	7 22	4 58	11 36	0 53	7 16	5 3	11 44
S	20 39 15	7 21	4 59	morn	1 28	7 16	5 4	morn
S	20 27 2	7 20	5 1	0 38	2 4	7 16	5 6	0 43
M	20 14 25	7 20	5 2	1 38	2 47	7 15	5 7	1 44
T	20 1 24	7 19	5 3	2 41	3 43	7 14	5 8	3 11
W	19 48 1	7 18	5 4	3 46	4 55	7 14	5 9	4 3
T	19 34 16	7 18	5 5	4 48	6 10	7 13	5 10	4 52
F	19 20 8	7 17	5 6	5 49	7 21	7 12	5 11	5 36
S	19 5 39	7 16	5 7	6 41	8 14	7 12	5 12	6 17
S	18 50 49	7 16	5 8	sets	9 2	7 11	5 13	sets
M	18 35 41	7 15	5 9	6 5	9 44	7 10	5 14	5 36
T	18 20 10	7 14	5 11	7 20	10 22	7 9	5 15	6 47
W	18 4 20	7 13	5 12	8 34	11 3	7 9	5 16	7 58
T	17 48 10	7 13	5 13	9 47	11 42	7 8	5 17	9 9
F	17 31 41	7 12	5 15	10 59	morn	7 7	5 19	10 18
S	17 14 51	7 11	5 16	morn	0 22	7 7	5 20	11 30

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For JANUARY, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	20	20	20	20	19	19	19	19	20	23	26	28	29	30	30	28	27	25	24	23	22	22	22	22
2	22	21	20	19	19	20	20	22	22	27	28	28	28	28	28	28	28	27	26	28	28	28	30	30
3	31	32	32	32	32	32	32	32	32	34	34	34	36	35	35	34	34	34	32	32	31	30	29	29
4	26	24	22	20	18	18	18	17	18	20	20	22	22	22	22	20	18	18	17	17	15	14	14	13
5	12	11	10	9	11	11	11	12	12	14	15	17	19	20	22	22	22	22	21	20	20	20	—	—
6	—	—	—	—	16	16	16	19	19	21	22	22	23	24	24	24	22	22	21	20	18	17	16	15
7	15	14	13	13	12	12	12	14	16	18	19	22	22	22	22	21	22	22	22	22	22	22	23	23
8	—	—	—	25	22	21	20	20	22	22	25	26	26	25	24	24	20	16	11	8	6	3	2	1
9	0	-2	-3	-4	-4	-5	-5	-3	-2	0	1	1	2	2	2	2	2	2	2	0	0	0	0	0
10	-1	-2	-2	-3	-3	-3	-2	0	2	4	8	10	11	14	14	13	13	12	12	12	11	11	12	14
11	14	15	16	16	16	15	15	18	20	23	25	26	27	28	27	26	24	22	23	21	20	19	18	16
12	17	18	18	17	17	15	16	17	19	20	22	22	22	23	24	24	24	24	24	25	26	26	26	28
13	29	30	31	34	36	38	38	36	35	36	36	34	34	33	34	32	32	32	32	32	31	31	29	29
14	29	28	27	26	36	26	25	26	26	28	29	30	32	29	20	27	26	26	25	25	24	24	24	24
15	23	22	22	22	21	20	20	24	25	26	27	30	28	28	28	27	27	25	25	24	24	24	24	23
16	23	22	21	21	19	18	18	20	22	25	26	26	26	29	29	28	28	28	26	26	25	24	24	25
17	25	25	25	25	25	25	25	26	26	30	31	32	34	32	32	32	29	29	28	28	28	28	28	28
18	28	28	28	30	29	28	28	29	30	32	34	34	34	34	34	34	32	32	30	30	29	28	27	27
19	26	25	24	24	24	22	22	24	28	28	30	34	38	37	35	32	28	25	23	22	19	17	15	14
20	13	12	12	12	10	10	10	10	12	12	13	18	18	18	17	14	14	14	14	14	14	14	14	14
21	14	14	14	14	14	13	14	14	14	16	18	18	20	22	22	21	20	18	17	16	16	15	14	14
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25	23	23	22	22	22	14	14	14	14	14	14	15	16	16	16	14	13	12	12	10	10	9	9	9
26	8	8	8	8	8	9	10	12	14	16	20	22	24	26	26	26	25	23	22	22	21	20	20	18
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31	—	—	—	14	14	13	13	14	16	18	20	24	23	24	22	22	20	20	20	19	20	19	19	19

☞ See note on page 53.

The COLD TERM which commenced at my place of observation on the morning of 26th of last month, ran through the remainder of that month and continued through all of this month. There have been five *perturbations*, viz.: on the 3d, between 9 A. M. and 7 P. M., nine hours, 34° to 36°; on the 13th, between 3 A. M. and 4 P. M., twelve hours, 33° to 38°; on the 18th, between 10 A. M. and 5 P. M., six hours, 34°; on the 19th, between the hours of 11 A. M. and 4 P. M., four hours, 34° to 38°; and on the 29th, between 12 M. and 3 P. M., two hours, 34° to 36°. The first *perturbation* was caused by a severe shock of earthquake in California, on the 2d, and the second by an earthquake at Santa Martha, on the 13th. The earthquakes connected with the perturbations of the 18th, 19th, and 29th, have not yet been heard from. Rain fell from 10 P. M. of 2d to 2 P. M. of 3d, temperature from 28° to 35°; again on the 13th, from 4 A. M. to 3. P. M.; and again on the 30th, from 12 M. to 4 P. M.

JANUARY.

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2d MONTH. **FEBRUARY, 1857.** 28 DAYS.

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTI-MORE. H. M.	CHARLES-TON, H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
First Quar.	1	3 36 ev.	3 24 ev.	3 14 ev.	3 0 ev.	1	12 12 30
Full Moon.	8	7 9 ev.	6 57 ev.	6 47 ev.	6 33 ev.	9	12 10 39
Third Qr.	16	9 36 ev.	9 24 ev.	9 14 ev.	9 0 ev.	17	12 8 25
New Moon.	24	7 14 mo.	7 2 mo.	6 52 mo.	6 38 mo.	25	12 5 59

Days of Month.	Days of Week.	Sun's decl. S.	CALENDAR FOR N. YORK CITY; Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois. SUN RISES	SUN SETS.	MOON SETS.	H.W. N. Y.	CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California. SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H M.	H. M.	H. M.	H. M.	H M.	H. M.
1	S	16 57 40	7 10	5 18	0 13	1 3	7 6	5 22	morn
2	M	16 40 27	7 9	5 19	1 19	1 47	7 5	5 23	0 45
3	T	16 22 46	7 8	5 20	2 44	2 34	7 4	5 24	2 1
4	W	16 4 40	7 7	5 21	3 57	3 36	7 3	5 25	3 19
5	T	15 46 36	7 6	5 22	5 0	4 57	7 2	5 26	4 28
6	F	15 28 7	7 5	5 24	5 54	6 31	7 1	5 27	5 33
7	S	15 9 21	7 4	5 25	6 37	7 47	7 0	5 28	6 26
8	S	14 50 20	7 3	5 26	rises	8 45	6 59	5 29	rises
9	M	14 31 5	7 2	5 28	6 17	9 30	6 58	5 30	6 4
10	T	14 11 35	7 0	5 29	7 21	10 10	6 57	5 31	7 36
11	W	13 51 51	6 59	5 30	8 23	10 45	6 56	5 32	8 35
12	T	13 31 54	6 58	5 32	9 23	11 16	6 55	5 34	9 33
13	F	13 11 42	6 56	5 33	10 23	11 47	6 54	5 35	10 32
14	S	12 51 19	6 55	5 34	11 25	ev 17	6 53	5 36	11 31
15	S	12 30 42	6 54	5 35	morn	0 48	6 52	5 37	morn
16	M	12 9 54	6 53	5 36	0 28	1 17	6 50	5 38	0 34
17	T	11 48 54	6 51	5 37	1 31	1 54	6 49	5 39	1 35
18	W	11 27 43	6 50	5 38	2 33	2 37	6 48	5 40	2 37
19	T	11 6 20	6 49	5 39	3 35	3 48	6 47	5 41	3 37
20	F	10 44 48	6 47	5 41	4 30	5 17	6 45	5 42	4 33
21	S	10 23 5	6 46	5 42	5 17	6 47	6 44	5 43	5 20
22	S	10 1 12	6 44	5 43	5 57	7 55	6 43	5 44	6 2
23	M	9 38 51	6 43	5 45	6 29	8 42	6 42	5 46	6 36
24	T	9 17 0	6 41	5 46	sets	9 25	6 40	5 47	sets
25	W	8 54 44	6 39	5 47	7 30	10 5	6 39	5 48	7 13
26	T	8 32 15	6 38	5 48	8 43	10 41	6 38	5 49	8 25
27	F	8 9 42	6 37	5 49	10 1	11 20	6 36	5 50	9 28
28	S	7 47 0	6 33	5 49	11 18	11 59	6 34	5 51	10 53

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

By E. MERIAM, Brooklyn Heights, L. I.

For FEBRUARY, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	19	18	18	18	18	19	20	22	24	26	26	32	30	30	30	28	28	28	29	30	30	30	30	27
2	25	25	25	25	24	22	20	24	24	24	24	22	22	22	20	20	18	17	16	16	14	14	12	11
3	10	9	7	6	5	4	4	4	5	8	9	10	12	12	13	10	10	10	9	8	8	8	6	5
4	5	5	5	4	4	4	4	6	6	9	10	12	12	14	15	13	13	12	12	10	10	9	—	8
5	10	—	—	—	—	9	8	10	11	13	14	16	17	18	18	16	16	14	14	14	12	11	10	10
6	10	10	—	—	8	8	7	8	12	13	16	16	18	—	18	18	16	16	16	17	18	18	18	18
7	18	17	17	—	21	22	22	24	26	25	27	29	31	31	31	31	30	31	30	30	30	30	30	30
8	30	30	30	30	31	32	30	31	32	30	31	32	32	33	32	31	29	28	28	28	26	24	25	25
9	22	22	22	22	21	21	21	21	22	24	27	29	28	28	25	24	22	20	20	18	17	18	17	16
10	16	15	15	14	13	13	12	14	16	18	21	26	26	29	27	28	28	28	26	26	27	25	24	24
11	24	23	23	23	23	23	23	24	29	30	36	38	41	39	38	37	35	35	35	36	36	36	35	—
12	—	—	—	—	35	33	32	34	36	38	40	36	36	32	28	26	24	20	15	12	8	0	7	7
13	—	—	—	—	4	4	3	3	7	8	11	10	14	14	11	11	11	10	10	9	9	8	5	4
14	—	—	—	—	2	2	2	4	5	8	10	12	12	13	14	14	12	11	11	12	12	14	13	13
15	—	—	—	—	14	14	14	17	20	20	25	26	28	28	28	27	26	26	28	28	27	28	28	29
16	—	—	—	—	26	25	26	24	28	31	34	36	34	37	38	36	34	34	34	34	33	34	33	34
17	—	—	—	—	—	24	23	22	22	24	22	21	22	20	20	18	16	14	13	11	12	12	12	12
18	—	—	—	—	12	12	12	14	18	20	20	18	18	19	18	18	16	14	12	11	10	10	10	14
19	—	—	—	14	13	13	14	16	18	21	22	23	24	25	26	26	25	23	22	22	22	22	22	22
20	—	—	—	22	22	22	22	24	28	32	34	32	34	34	34	34	32	31	29	28	28	28	29	—
21	30	—	—	—	28	28	26	30	32	36	38	38	38	38	38	37	36	34	32	31	30	30	29	28
22	—	—	—	—	25	25	25	29	31	35	38	39	40	40	40	40	37	35	34	33	32	32	33	—
23	—	—	—	—	29	30	30	34	36	38	40	39	40	40	40	38	38	36	36	37	37	38	38	37
24	—	—	—	—	—	32	30	32	31	34	31	31	31	32	34	31	30	29	27	26	27	27	26	—
25	—	—	—	—	25	24	26	28	30	32	32	36	37	38	36	35	32	32	30	30	30	30	30	30
26	—	—	—	—	22	22	22	25	26	28	30	32	32	32	34	32	30	30	28	27	26	26	25	25
27	—	—	—	—	23	23	24	28	30	33	31	31	34	30	30	27	26	26	26	25	26	26	27	27
28	—	—	—	—	24	23	23	27	29	30	33	32	33	34	34	34	34	31	30	30	30	29	29	28
29	—	—	—	—	25	26	26	30	32	32	36	34	36	36	38	36	34	31	33	32	31	31	30	30

☞ See note on page 53.

The COLD TERM which commenced on the 26th of December, between 6 and 7 A. M., and continued through the remainder of that month and of January to the 20th day of this month (February), terminated at 12 M. of the last-named day, having had a duration of 1,350 hours, or three and three fourth circles of 360 hours each. In this month, before the 20th, there were three perturbations, viz.: on the 8th at 2 P. M., of one hour, 33°; on the 11th and 12th, twenty-six hours, 33° to 40°; 16th and 17th, fourteen or more hours, 34° to 38°. On the 12th, an earthquake was felt at St. Jago de Cuba; and on the 17th, the shock of an earthquake was experienced off the Island of Mantuasso. No earthquake has been heard from on the 8th, but there was a water-spout on the 7th, and was near destroying a vessel on a voyage to New Orleans. Rain on the 7th, while the temperature was from 8° to 1° below the freezing-point, and on the 16th at 9 P. M.

FEBRUARY.

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3d MONTH. **MARCH, 1857.** 31 DAYS.

MOON'S PHASES.		BOSTON.	N. YORK.	BALTI-MORE.	CHARLES-TON.	Sun on Meridian, or noonmark.	
	D.	H. M.	H. M.	H. M.	H. M.	D.	H. M. S.
First Quar.	2	11 46 ev.	11 34 ev.	11 24 ev.	11 3 ev.	1	12 12 30
Full Moon.	10	11 33 mo.	11 21 mo.	11 11 mo.	10 59 mo.	9	12 10 37
Third Qr.	18	4 19 ev.	4 7 ev.	3 57 ev.	3 36 ev.	17	12 8 25
New Moon.	25	5 44 ev.	5 32 ev.	5 20 ev.	5 1 ev.	25	12 6 0

Days of Month.	Days of Week.	Sun's decl. S.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va. Kentucky, Mo., and California.		
			SUN RISES	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	S	7 24 14	6 35	5 50	morn	morn	6 33	5 52	morn
2	M	7 1 19	6 33	5 51	0 36	0 58	6 31	5 53	0 8
3	T	6 38 20	6 32	5 53	1 48	1 19	6 30	5 54	1 21
4	W	6 15 16	6 30	5 54	2 53	2 7	6 29	5 55	2 27
5	T	5 52 5	6 29	5 55	3 59	3 10	6 27	5 56	3 24
6	F	5 28 59	6 27	5 56	4 33	4 45	6 26	5 57	4 13
7	S	5 5 31	6 26	5 58	5 13	6 27	6 25	5 58	4 53
8	S	4 42 8	6 24	5 59	5 44	7 44	6 24	5 59	5 25
9	M	4 18 43	6 23	6 0	6 6	8 33	6 22	6 0	5 52
10	T	3 55 14	6 21	6 1	rises	9 16	6 20	6 1	rises
11	W	3 31 49	6 19	6 2	7 12	9 49	6 18	6 2	7 23
12	T	3 8 6	6 17	6 3	8 13	10 20	6 17	6 3	8 24
13	F	2 44 29	6 15	6 4	9 14	10 47	6 15	6 4	9 22
14	S	2 20 51	6 14	6 5	10 17	11 16	6 14	6 5	10 23
15	S	1 57 10	6 12	6 6	11 19	11 43	6 13	6 6	11 23
16	M	1 33 29	6 10	6 7	morn	ev 11	6 11	6 7	morn
17	T	1 9 47	6 9	6 8	0 21	0 10	6 10	6 8	0 25
18	W	0 46 4	6 7	6 9	1 23	1 17	6 8	6 9	1 25
19	T	0 22 22	6 5	6 10	2 16	1 59	6 6	6 10	2 23
20	F	N. 1 21	6 3	6 12	3 9	3 2	6 5	6 11	3 13
21	S	0 25 2	6 2	6 13	3 51	4 40	6 3	6 12	3 56
22	S	0 48 42	6 0	6 14	4 25	6 13	6 2	6 13	4 33
23	M	1 12 21	5 59	6 15	4 53	7 28	6 1	6 14	5 3
24	T	1 35 58	5 58	6 16	sets	8 16	5 59	6 15	5 33
25	W	1 58 33	5 56	6 17	6 19	8 56	5 57	6 16	sets
26	T	2 23 6	5 55	6 18	7 35	9 36	5 56	6 17	7 17
27	F	2 46 34	5 54	6 19	8 55	10 12	5 54	6 18	8 32
28	S	3 10 0	5 52	6 20	10 15	10 52	5 53	6 19	9 50
29	S	3 33 22	5 51	6 21	11 37	11 33	5 52	6 20	11 4
30	M	3 56 40	5 49	6 22	morn	morn	5 50	6 21	morn
31	T	4 19 54	5 47	6 23	0 48	0 15	5 48	6 22	0 18

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For MARCH, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	30	30	29	32	34	37	38	40	38	34	32	28	28	26	26	26	26	26	27	27
2	30	30	30	30	30	30	30	30	32	32	34	37	37	39	40	38	34	33	32	31	30	28	27	27
3	26	25	24	24	24	24	24	25	26	28	29	31	31	32	34	31	29	28	28	27	25	24	22	22
4	22	22	22	22	18	18	18	24	28	32	34	35	36	38	40	42	41	39	38	37	35	34	32	28
5	27	26	24	23	22	20	22	24	24	29	32	30	29	29	30	29	28	26	26	25	24	24	25	25
6	—	—	—	—	28	28	28	29	32	37	37	37	38	44	42	42	33	30	28	26	24	23	23	22
7	—	—	—	—	16	15	15	17	19	22	22	24	24	26	26	26	26	24	24	27	26	26	27	27
8	27	—	—	28	28	28	28	32	36	37	38	40	40	36	37	36	33	30	27	26	23	19	15	14
9	12	11	10	9	8	8	8	8	12	12	14	18	18	18	18	18	16	16	15	15	13	13	13	13
10	12	10	9	8	5	4	4	6	7	8	11	12	13	13	16	15	14	14	13	14	14	14	14	14
11	14	14	14	13	12	11	14	17	18	20	27	28	29	32	32	31	30	29	28	27	26	26	25	23
12	23	22	22	21	19	18	20	22	24	28	28	28	28	29	30	30	28	26	26	25	23	22	22	22
13	22	21	21	20	20	20	20	23	26	29	31	32	33	34	34	33	32	31	29	28	28	27	25	25
14	25	24	24	23	23	22	22	26	28	32	33	34	36	38	38	39	37	34	33	32	30	30	31	30
15	30	30	30	29	29	29	30	33	36	38	36	41	40	42	42	41	38	36	36	34	32	30	30	29
16	—	—	—	—	25	25	26	28	32	36	37	39	40	39	38	36	33	32	31	29	29	28	28	27
17	26	25	23	23	24	24	25	28	32	36	36	37	38	38	39	39	39	36	32	32	32	30	29	28
18	—	—	—	—	25	24	26	30	35	39	41	42	42	42	43	43	38	36	35	34	34	34	34	34
19	—	32	32	31	30	30	30	31	31	33	33	32	31	31	32	31	30	30	30	30	30	30	31	31
20	30	28	27	26	27	25	25	32	33	38	40	43	43	42	42	40	37	34	34	34	34	34	33	33
21	33	33	32	32	30	30	31	34	38	40	42	42	43	43	44	43	42	39	38	38	36	36	35	34
22	—	—	—	—	32	32	33	35	38	40	40	40	40	40	40	40	40	38	36	36	34	34	33	32
23	31	31	31	31	30	30	30	32	37	40	41	42	42	44	45	46	44	40	38	36	34	34	34	34
24	34	33	33	33	34	34	38	41	44	45	47	42	42	40	37	35	33	32	33	33	32	32	32	32
25	31	31	31	30	30	30	30	32	35	36	40	42	41	42	43	42	40	38	38	37	36	35	35	35
26	—	—	—	—	29	29	31	38	40	40	40	41	42	42	42	41	40	39	36	35	34	34	33	31
27	—	—	—	—	29	30	32	35	38	40	40	39	40	39	37	36	34	32	30	30	29	28	28	28
28	—	—	—	—	22	22	21	25	28	28	32	30	28	28	28	28	26	24	22	24	24	24	24	24
29	—	—	—	—	24	24	25	28	31	32	34	36	36	36	38	38	36	34	32	30	28	27	28	28
30	25	25	24	22	21	21	23	30	30	30	31	33	34	34	36	34	33	31	30	28	28	26	25	24
31	23	22	21	20	20	21	22	23	30	30	31	32	33	34	35	33	31	30	28	28	28	27	26	25

☞ See note on page 53.

A COLD TERM commenced on the 8th, between the hours of 5 and 6 A. M., and ended on the 13th, between 12 M. and 1 P. M., duration 114 hours, overrunning five sections of the circle about 90 minutes, in parts of two hours, in the beginning and ending of the circle. The circle can not be measured nearer than this by records made hourly, it being impossible to determine at what minute between the hours the cold term commences or ends; and besides this, the variations in clock-time may make a difference; and there may be an influence on the thermometers by the opening of a door, and two different observers of unequal stature may record a degree difference in looking up or down at the line not ranging horizontally with the eyes of such observers.

MARCH.

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MARCH.

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th MONTH. **APRIL, 1857.** 30 DAYS

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian. D.	H. M. S.
irst Quar.	1	8 50 mo.	8 38 mo.	8 28 mo.	8 14 mo.	1	12 3 51
ull Moon.	9	4 44 mo.	4 32 mo.	4 22 mo.	4 8 mo.	9	12 1 30
hird Qr.	17	7 16 mo.	7 4 mo.	6 54 mo.	6 40 mo.	17	11 59 27
ew Moon.	24	2 30 mo.	2 18 mo.	2 8 mo.	1 54 mo.	25	11 57 49
irst Quar.	30	7 34 ev.	7 22 ev.	7 12 ev.	6 58 ev.		

			CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
Days of Month.	Days of Week.	Sun's decl. N. ° ′ ″	SUN RISES. H. M.	SUN SETS. H. M.	MOON SETS. H. M.	H.W. N. Y. H. M.	SUN RISES. H. M.	SUN SETS. H. M.	MOON R. & S. H. M.
1	W	4 43 2	5 45	6 24	1 48	1 0	5 46	6 22	1 20
2	T	5 6 5	5 42	6 25	2 37	1 51	5 44	6 23	2 10
3	F	5 28 4	5 41	6 26	3 17	3 1	5 43	6 24	2 54
4	S	5 51 56	5 39	6 27	3 47	4 39	5 41	6 25	3 28
5	**S**	6 14 41	5 37	6 28	4 13	6 15	5 39	6 25	3 56
6	M	6 36 20	5 35	6 29	4 34	7 22	5 38	6 26	4 21
7	T	6 59 53	5 33	6 30	4 53	8 10	5 37	6 27	4 42
8	W	7 22 38	5 31	6 31	rises	8 45	5 35	6 28	5 3
9	T	7 44 35	5 30	6 32	7 4	9 15	5 33	6 29	rises
10	F	8 6 46	5 28	6 33	8 7	9 46	5 31	6 30	8 13
11	S	8 28 48	5 26	6 34	9 9	10 16	5 29	6 31	9 16
12	**S**	8 50 41	5 25	6 35	10 12	10 43	5 28	6 32	10 18
13	M	9 12 26	5 24	6 36	11 14	11 12	5 27	6 33	11 18
14	T	9 34 1	5 22	6 37	morn	11 43	5 25	6 34	morn
15	W	9 55 28	5 21	6 38	0 10	ev 15	5 24	6 35	0 15
16	T	10 16 44	5 20	6 39	1 3	0 52	5 23	6 36	1 5
17	F	10 37 51	5 18	6 40	1 51	1 39	5 21	6 37	1 50
18	S	10 58 48	5 16	6 41	2 23	2 41	5 20	6 38	2 28
19	**S**	11 19 34	5 15	6 42	2 54	4 13	5 19	6 39	3 1
20	M	11 40 8	5 13	6 44	3 22	5 40	5 17	6 40	3 29
21	T	12 0 31	5 11	6 45	3 45	6 50	5 15	6 41	3 55
22	W	12 20 42	5 10	6 46	4 9	7 38	5 14	6 42	4 22
23	T	12 40 42	5 9	6 47	4 35	8 21	5 13	6 43	sets
24	F	13 0 29	5 7	6 48	sets	9 1	5 11	6 44	7 22
25	S	13 20 3	5 6	6 49	9 8	9 43	5 10	6 45	8 40
26	**S**	13 39 24	5 5	6 50	10 27	10 29	5 9	6 46	9 57
27	M	13 58 32	5 3	6 51	11 36	11 12	5 7	6 47	11 7
28	T	14 17 25	5 2	6 52	morn	11 59	5 6	6 48	morn
29	W	14 36 4	5 1	6 53	0 33	morn	5 4	6 49	0 4
30	T	14 54 29	5 0	6 54	1 15	0 48	5 3	6 50	0 52

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For APRIL, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	21	21	22	30	34	36	37	38	38	40	42	40	40	37	35	34	32	30	29	28
2	—	—	—	—	25	26	29	38	42	46	46	46	46	46	44	42	40	40	40	40	40	39	39	41
3	41	42	43	44	44	43	43	46	48	50	54	56	58	56	58	57	54	51	45	42	41	42	43	41
4	41	42	42	43	42	42	43	44	48	52	54	55	56	56	52	52	50	48	45	44	44	42	42	42
5	—	—	—	—	34	34	37	45	48	48	48	50	50	50	49	48	46	44	42	39	38	36	36	36
6	36	36	35	35	34	34	36	47	48	49	51	52	54	54	53	52	50	48	47	45	42	41	40	38
7	36	35	35	34	33	33	38	47	52	52	54	57	58	58	57	54	50	47	45	44	43	43	43	43
8	—	—	—	—	38	39	43	50	52	58	58	59	60	62	61	60	56	52	48	—	46	46	46	46
9	—	—	—	—	42	41	46	58	62	64	64	64	62	62	—	59	58	58	55	54	54	52	52	53
10	—	—	—	—	46	47	48	50	54	54	54	54	55	54	56	56	53	52	48	46	43	41	40	—
11	—	—	—	—	33	33	38	43	47	48	52	55	50	52	50	46	45	43	44	44	44	44	44	43
12	—	—	—	—	42	42	43	47	50	56	62	67	68	70	70	70	70	66	—	59	62	60	56	53
13	—	—	—	—	—	36	37	35	38	39	41	—	45	46	50	50	48	46	42	40	40	39	37	35
14	—	—	—	—	31	34	39	43	46	52	56	56	57	59	57	53	50	47	46	46	46	46	46	46
15	—	—	—	—	44	45	47	49	52	53	55	46	52	50	48	48	44	42	42	43	42	42	41	40
16	—	—	—	—	40	40	42	44	48	50	54	54	54	54	53	50	48	47	44	41	41	40	40	39
17	—	—	—	—	40	41	44	44	46	49	54	50	48	50	48	49	48	46	46	48	48	48	47	47
18	—	—	—	—	42	44	48	58	60	64	60	64	61	65	62	62	60	55	50	50	50	50	48	—
19	—	—	—	—	42	44	50	61	64	66	66	66	65	64	58	58	56	56	54	50	50	50	50	50
20	—	—	—	48	48	48	—	48	49	44	43	41	40	39	40	40	39	38	38	38	38	38	39	39
21	—	—	—	—	40	42	42	42	42	42	42	42	40	40	40	40	40	40	40	40	40	40	39	—
22	—	—	—	—	39	39	39	40	40	42	42	50	50	45	45	45	45	47	42	44	44	44	42	41
23	—	—	—	—	38	40	44	50	54	58	61	58	56	56	54	54	52	50	48	47	46	45	46	46
24	—	—	—	—	46	46	48	49	52	56	59	59	63	64	66	66	65	60	56	53	53	52	53	—
25	—	—	—	—	50	50	53	56	56	59	62	66	68	68	69	59	59	54	53	50	48	47	46	45
26	—	—	—	—	45	46	50	57	57	58	58	62	63	63	61	57	54	50	48	46	44	44	43	—
27	—	—	—	—	—	—	46	56	60	62	64	65	62	62	61	61	63	60	56	55	54	52	52	—
28	—	—	—	—	48	50	58	61	61	62	70	73	76	74	72	72	71	70	62	59	58	57	58	—
29	—	—	—	—	49	49	51	56	60	64	66	70	70	67	66	64	62	58	54	54	54	53	55	—
30	—	—	—	—	48	54	57	58	58	60	62	62	62	58	57	58	55	55	50	48	46	44	43	43

☞ See note on page 53.

In the month of April the sun does not rise here before 5 A. M.; the 5 A. M. records of observation were therefore, with the exception of 13th and 27th, all made before sunrise. The Hudson river became free from ice, and was open all the way from New York to Albany on the 10th, having been closed for a period of 105 days. The St. Lawrence river, at Quebec, opened before the Hudson. The temperature of the 12th rose to 70°, at which it remained for four consecutive hours. Thunder storms and tornadoes prevailed on that day over a very extensive surface of the United States and the British Provinces. From 11th to 13th is that part of the month of April on which atmospheric disturbances usually occur.

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5th MONTH.

MAY, 1857.

31 DAYS.

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
New Moon.	9	9 27 ev.	9 15 ev.	9 5 ev.	8 51 ev.	1	11 56 55
First Quar.	16	6 26 ev.	6 14 ev.	6 4 ev.	5 50 ev.	9	11 56 13
Full Moon.	23	10 4 mo.	9 52 mo.	9 42 mo.	9 28 mo.	17	11 56 8
Third Qr.	30	8 28 mo.	8 16 mo.	8 6 mo.	7 52 mo.	25	11 56 40

			CALENDAR FOR N. YORK CITY Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
Days of Month.	Days of Week.	Sun's decl. N.	SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H M.	H. M.	H. M.	H. M.	H M.	H. M.
1	F	15 12 39	4 59	6 55	1 49	1 45	5 2	6 52	1 30
2	S	15 30 33	4 58	6 56	2 17	2 54	5 1	6 53	2 1
3	S	15 48 12	4 57	6 57	2 39	4 19	5 0	6 54	2 27
4	M	16 5 37	4 56	6 58	2 59	5 36	4 59	6 55	2 46
5	T	16 22 45	4 55	6 59	3 18	6 42	4 58	6 56	3 9
6	W	16 39 35	4 54	7 0	3 38	7 31	4 57	6 56	3 31
7	T	16 56 10	4 53	7 1	3 56	8 7	4 56	6 57	3 51
8	F	17 12 27	4 52	7 2	rises	8 42	4 55	6 58	4 14
9	S	17 28 29	4 51	7 3	8 4	9 13	4 54	6 59	rises
10	S	17 44 19	4 50	7 4	9 7	9 47	4 53	7 0	9 9
11	M	17 59 39	4 49	7 5	10 6	10 17	4 52	7 1	10 9
12	T	18 15 44	4 48	7 6	10 59	10 49	4 51	7 2	11 2
13	W	18 29 35	4 47	7 7	11 46	11 23	4 50	7 3	11 47
14	T	18 44 5	4 45	7 8	morn	11 58	4 49	7 4	morn
15	F	18 58 18	4 44	7 9	0 23	ev 38	4 48	7 5	0 28
16	S	19 12 10	4 43	7 10	0 53	1 30	4 47	7 6	1 1
17	S	19 25 45	4 42	7 11	1 21	2 28	4 46	7 7	1 29
18	M	19 38 58	4 41	7 12	1 47	3 46	4 45	7 7	1 54
19	T	19 51 52	4 40	7 13	2 9	4 57	4 44	7 8	2 19
20	W	20 4 26	4 39	7 14	2 34	6 4	4 44	7 9	2 48
21	T	20 16 39	4 38	7 15	2 59	6 55	4 43	7 10	3 16
22	F	20 28 31	4 37	7 16	3 30	7 45	4 42	7 10	3 50
23	S	20 40 3	4 36	7 17	sets	8 34	4 42	7 11	sets
24	S	20 51 13	4 35	7 18	9 15	9 24	4 41	7 12	8 44
25	M	21 2 0	4 35	7 19	10 19	10 11	4 40	7 13	9 47
26	T	21 12 29	4 34	7 20	11 10	11 1	4 40	7 14	10 42
27	W	21 22 33	4 33	7 21	11 49	11 50	4 39	7 14	11 26
28	T	21 32 16	4 33	7 22	morn	morn	4 38	7 15	morn
29	F	21 41 36	4 32	7 23	0 19	0 40	4 38	7 16	0 1
30	S	21 50 33	4 31	7 24	0 43	1 34	4 37	7 16	0 27
31	S	21 59 7	4 31	7 25	1 8	2 31	4 37	7 17	0 51

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For MAY, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	43	43	44	48	48	49	49	49	50	50	48	45	44	40	40	39	39	39	39	—
2	—	—	—	—	39	40	40	41	41	44	43	45	46	46	47	47	45	45	45	45	44	42	42	—
3	—	—	—	—	40	41	41	44	46	45	44	44	44	44	44	46	44	44	44	44	44	44	44	—
4	—	—	—	—	43	45	49	57	58	57	57	57	56	56	58	59	59	54	52	49	48	46	45	44
5	—	—	—	—	38	40	43	54	56	51	56	55	54	58	56	53	52	51	49	48	46	46	45	—
6	—	—	—	—	39	42	52	56	61	58	58	58	59	63	62	60	54	52	50	50	49	48	48	47
7	—	—	—	—	46	46	—	53	53	60	56	58	58	55	54	50	47	48	45	44	44	44	43	—
8	—	—	—	—	41	41	42	42	42	42	42	42	43	43	42	42	42	42	43	43	43	43	43	—
9	—	—	—	—	42	42	42	44	46	47	46	46	47	47	46	44	44	44	44	42	43	44	44	—
10	—	—	—	—	41	42	42	46	45	48	50	47	48	50	49	48	49	48	48	48	46	46	46	45
11	—	—	—	46	46	46	46	49	54	62	64	68	68	70	72	72	71	70	68	65	61	57	56	55
12	—	—	—	—	51	51	64	72	78	78	79	81	81	81	78	80	78	74	70	66	67	68	67	—
13	—	—	—	—	54	56	56	60	65	68	66	61	64	66	62	58	56	55	—	48	47	46	45	—
14	—	—	—	45	46	46	48	49	52	54	57	60	62	62	62	63	57	55	54	50	49	48	48	47
15	—	—	—	—	45	47	54	56	58	62	72	68	70	68	64	62	62	64	58	57	58	58	56	—
16	—	—	—	—	53	56	63	68	73	70	72	71	70	66	61	62	60	59	59	58	57	56	55	—
17	—	—	—	—	55	—	60	67	72	72	74	74	73	70	70	68	66	62	58	58	57	56	55	—
18	—	—	—	—	50	51	63	66	68	71	71	72	72	72	72	73	71	64	60	59	58	54	53	—
19	—	—	—	52	53	53	56	58	63	66	69	70	71	68	68	64	63	61	56	58	57	56	56	—
20	—	—	—	—	53	55	57	58	64	71	74	78	76	80	81	78	76	72	68	66	62	60	59	—
21	—	—	—	—	50	54	64	70	68	66	68	67	67	70	72	71	68	66	64	62	60	57	55	—
22	—	—	—	—	48	50	59	70	72	70	73	74	74	75	76	74	70	66	64	62	62	60	58	56
23	—	—	—	—	52	57	66	74	77	76	78	80	82	84	84	82	80	78	76	73	70	66	65	—
24	—	—	—	60	62	64	72	79	80	82	85	88	88	90	91	88	84	82	78	76	74	73	71	—
25	—	—	—	—	58	54	58	60	62	67	68	68	69	66	67	58	54	54	50	48	46	46	46	45
26	—	—	—	43	43	—	56	60	60	58	59	62	64	64	64	64	60	60	60	58	55	54	52	—
27	—	—	—	46	48	51	62	64	70	70	73	72	71	70	68	64	61	58	54	54	53	53	54	—
28	—	—	—	56	56	58	60	66	72	76	72	66	77	76	70	66	68	68	66	65	63	60	59	58
29	—	—	—	51	52	63	65	70	71	70	73	71	68	66	66	64	60	57	53	54	54	52	50	—
30	—	—	—	42	41	43	54	54	58	60	60	54	60	60	58	54	54	54	50	47	44	43	41	—
31	—	—	—	38	38	40	50	58	56	56	56	56	60	60	61	63	60	60	58	54	52	52	50	—

☞ See note on page 53.

The temperature on the 24th rose to 91°, and for ten consecutive hours averaged 86°. At Boston, Mass., the temperature rose to 93°. Terrific thunder storms prevailed at Highfield House Observatory, England, in the provinces of New Brunswick and Canada East, and in the States of Massachusetts, New Hampshire, Vermont, and New York, attended in some of the places by torrents of rain, in others by hail, and in Florence, New York, snow fell to the depth of two inches, and snow also in the province of Canada West. The lowest temperature in this month was on the 31st, at 4 and 5 A. M., 38°. In May the sun rises here at 5 A. M., on the 6th, and on the 31st 21 minutes before that hour. Between the 6th and 26th inclusive, with the exception of the 11th, 14th, 19th, and 24th, the early morning observations were made a few minutes after sunrise, owing to absence from home or sickness at home.

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th MONTH. JUNE, 1857. 30 DAYS.

MOON'S PHASES.	D.	BOSTON H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
ull Moon.	7	0 39 ev.	0 27 ev.	0 17 ev.	0 3 ev.	1	11 57 33
hird Qr.	15	2 26 mo.	2 14 mo.	2 4 mo.	1 50 mo.	9	11 58 56
ew Moon.	21	5 19 ev.	5 7 ev.	4 57 ev.	4 43 ev.	17	12 0 35
irst Quar.	28	11 36 ev.	11 24 ev.	11 14 ev.	11 0 ev.	25	12 2 19

Days	Days of Week.	Sun's decl. N.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H M.	H. M.	H. M.	H. M.	H M.	H. M.
1	M	22 7 20	4 31	7 24	1 23	3 35	4 36	7 18	1 14
2	T	22 15 9	4 30	7 25	1 42	4 43	4 36	7 19	1 35
3	W	22 22 34	4 30	7 25	2 2	5 41	4 35	7 19	1 56
4	T	22 29 36	4 29	7 26	2 23	6 36	4 35	7 20	2 19
5	F	22 36 14	4 29	7 27	2 49	7 24	4 35	7 20	2 43
6	S	22 42 29	4 28	7 27	rises	8 6	4 34	7 21	3 14
7	S	22 48 20	4 28	7 28	7 59	8 45	4 34	7 21	3 52
8	M	22 53 47	4 28	7 28	8 55	9 21	4 34	7 22	rises
9	T	22 58 50	4 28	7 29	9 43	9 58	4 34	7 22	9 47
0	W	23 3 28	4 28	7 29	10 22	10 34	4 34	7 23	10 29
1	T	23 7 43	4 28	7 30	10 57	11 11	4 34	7 24	11 3
2	F	23 11 33	4 28	7 30	11 24	11 49	4 34	7 25	11 59
3	S	23 14 59	4 28	7 31	11 49	ev 33	4 34	7 25	morn
4	S	23 18 0	4 28	7 31	morn	1 17	4 34	7 26	0 28
5	M	23 20 36	4 28	7 32	0 12	2 9	4 33	7 27	0 49
6	T	23 22 48	4 28	7 32	0 35	3 10	4 33	7 27	1 14
7	W	23 24 35	4 28	7 33	1 0	4 18	4 33	7 28	1 44
8	T	23 25 57	4 28	7 33	1 27	5 16	4 33	7 28	2 20
9	F	23 26 55	4 29	7 34	2 0	6 20	4 33	7 28	3 5
0	S	23 27 27	4 29	7 34	2 42	7 21	4 34	7 28	3 59
1	S	23 27 40	4 29	7 34	sets	8 10	4 34	7 28	sets
2	M	23 27 18	4 29	7 34	8 57	9 11	4 34	7 29	8 28
3	T	23 26 36	4 29	7 35	9 43	10 5	4 34	7 29	9 15
4	W	23 25 29	4 30	7 35	10 17	10 55	4 35	7 29	9 55
5	T	23 23 57	4 30	7 35	10 44	11 41	4 35	7 29	10 26
6	F	23 22 1	4 30	7 35	11 7	morn	4 35	7 29	10 52
7	S	23 19 40	4 30	7 35	11 28	0 26	4 35	7 29	11 16
8	S	23 16 54	4 31	7 35	11 48	1 11	4 36	7 29	11 39
9	M	23 13 45	4 31	7 35	morn	1 58	4 36	7 29	11 59
0	T	23 10 10	4 31	7 35	0 4	2 45	4 36	7 29	morn

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For JUNE, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	48	49	53	55	65	70	72	71	73	75	76	77	74	68	66	60	59	57	58	56	56
2	—	—	—	54	54	59	70	76	78	80	83	84	84	86	88	86	81	80	—	75	73	70	69	—
3	—	—	—	62	64	67	70	75	84	83	86	89	92	94	93	81	74	75	74	70	68	66	65	64
4	—	—	—	62	63	65	74	78	76	85	86	86	88	88	82	82	80	76	74	72	66	64	64	64
5	—	—	—	62	63	66	74	75	77	63	66	66	67	68	68	69	66	66	62	59	56	56	54	54
6	—	—	—	51	52	52	52	52	54	55	54	57	56	54	54	53	54	55	54	55	54	52	53	53
7	—	—	—	51	52	53	54	62	63	69	72	72	74	76	76	75	72	66	62	62	60	60	57	—
8	—	—	—	55	56	57	58	60	62	66	66	68	69	67	64	62	63	63	60	58	56	54	55	55
9	—	—	—	54	55	57	56	58	60	68	70	74	78	75	79	75	75	72	70	65	65	64	61	—
10	—	—	—	56	58	66	72	74	77	81	81	82	82	82	82	80	75	70	68	68	68	68	65	64
11	—	—	—	60	61	64	74	80	84	82	83	84	86	84	82	78	75	73	70	68	66	64	63	—
12	—	—	—	60	60	—	64	66	72	76	77	80	78	78	74	71	66	67	66	63	62	60	60	60
13	60	60	60	60	60	60	62	66	68	68	74	71	72	78	79	80	76	73	71	68	65	66	64	63
14	—	—	—	59	61	66	67	70	70	73	80	80	82	84	80	74	74	72	72	71	68	66	66	64
15	—	—	—	58	58	62	68	74	77	77	78	78	82	78	80	78	76	71	68	64	62	60	59	57
16	—	—	—	53	54	58	70	72	78	78	78	78	76	80	80	76	75	70	68	64	62	60	59	59
17	—	—	—	54	55	61	71	80	82	81	80	82	82	84	82	78	76	73	70	66	66	64	64	64
18	—	—	—	60	61	61	61	61	62	63	64	62	60	61	61	61	62	65	64	62	62	60	60	60
19	—	—	—	60	60	61	66	70	69	72	74	78	77	78	78	78	77	73	70	69	67	65	64	—
20	—	—	—	59	60	66	76	82	84	84	84	88	88	90	90	90	88	79	78	79	76	74	73	—
21	—	—	—	66	68	74	85	89	92	92	92	93	95	95	96	96	92	89	86	85	81	79	78	74
22	—	—	—	72	72	75	82	90	94	94	94	95	96	94	98	98	75	78	79	79	75	74	73	73
23	74	74	75	76	76	76	78	72	68	66	68	73	76	78	78	76	74	72	68	66	65	63	62	61
24	—	—	—	58	60	65	68	72	76	76	74	80	79	78	76	74	71	69	68	67	65	64	63	—
25	—	—	—	62	62	66	71	71	70	78	73	72	74	74	74	74	74	71	71	72	68	68	68	—
26	—	—	—	66	68	—	72	74	82	86	86	88	88	88	88	88	84	80	77	76	74	76	75	—
27	—	—	—	70	72	76	80	85	88	86	86	85	86	87	88	87	86	82	81	79	80	72	68	—
28	—	—	—	61	61	72	76	82	84	83	84	85	86	86	86	86	86	86	86	85	84	78	77	78
29	—	—	—	72	73	76	86	92	96	94	96	95	96	98	98	97	94	91	88	86	86	85	82	—
30	—	—	—	76	78	78	90	95	96	94	92	94	94	94	94	92	91	89	87	84	83	82	80	79

☞ See note on page 53.

JUNE.—A HEATED TERM commenced here on the 20th and ended on the 22d; duration three days; greatest intensity 98°. Thunder storms within the field of our research on all of the three days composing this heated term. A second heated term commenced here on the 26th, which continued through the remainder of the month and to end, including the 8th of July; duration twelve days, or four times that of the first term. Greatest intensity 98°. On the 29th, at 2 and 3 P. M., when the temperature was 98°, a terrific tornado was sweeping every thing before it at Woodstock and other places in Canada West, and the next morning at 9 o'clock, when the temperature here was 96°, the tornado was spreading destruction in its path in Franklin and Clinton counties, New York.

JUNE.

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7th MONTH. **JULY, 1857.** 31 DAYS.

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
Full Moon.	7	2 0 mo.	1 48 mo.	1 38 mo.	1 24 mo.	1	12 3 32
Third Qr.	14	8 12 mo.	8 0 mo.	7 50 mo.	7 36 mo.	9	12 4 54
New Moon.	21	1 28 mo.	1 16 mo.	1 6 mo.	0 52 mo.	17	12 5 49
First Quar.	28	4 30 ev.	4 18 ev.	4 8 ev.	3 54 ev.	25	12 6 12

Days of Month.	Days of Week.	Sun's decl. N.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	W	23 6 12	4 31	7 35	0 26	3 38	4 37	7 29	0 22
2	T	23 1 49	4 32	7 35	0 51	4 36	4 37	7 29	0 45
3	F	22 57 2	4 32	7 35	1 19	5 34	4 38	7 29	1 13
4	S	22 51 51	4 33	7 34	1 53	6 37	4 38	7 28	1 50
5	**S**	22 46 16	4 33	7 34	2 37	7 33	4 39	7 28	2 32
6	M	22 40 17	4 34	7 34	rises	8 21	4 40	7 28	3 23
7	T	22 33 55	4 34	7 34	8 23	9 4	4 40	7 28	rises
8	W	22 27 10	4 35	7 33	8 58	9 45	4 14	7 27	9 6
9	T	22 20 1	4 36	7 33	9 26	10 22	4 42	7 27	9 37
10	F	22 12 29	4 37	7 33	9 53	11 0	4 42	7 27	10 2
11	S	22 4 34	4 38	7 32	10 16	11 39	4 43	7 26	10 28
12	**S**	21 56 17	4 39	7 32	10 30	ev 17	4 44	7 26	10 52
13	M	21 47 37	4 39	7 31	11 2	1 1	4 45	7 25	11 17
14	T	21 38 33	4 40	7 31	11 27	1 48	4 45	7 25	11 46
15	W	21 29 9	4 41	7 30	11 58	2 37	4 46	7 24	morn
16	T	21 19 23	4 42	7 29	morn	3 34	4 47	7 24	0 16
17	F	21 9 14	4 43	7 29	0 36	4 41	4 48	7 23	0 57
18	S	20 58 44	4 43	7 28	1 23	5 54	4 49	7 23	1 46
19	**S**	20 47 54	4 44	7 27	2 24	7 11	4 50	7 22	2 46
20	M	20 36 41	4 45	7 27	3 35	8 15	4 50	7 22	3 55
21	T	20 25 7	4 46	7 26	sets	9 12	4 51	7 21	sets
22	W	20 13 12	4 47	7 25	8 49	10 1	4 52	7 20	8 24
23	T	20 0 58	4 48	7 24	9 7	10 45	4 53	7 19	8 52
24	F	19 48 24	4 49	7 23	9 28	11 23	4 53	7 18	9 17
25	S	19 35 30	4 49	7 22	9 49	12 0	4 54	7 17	9 39
26	**S**	19 22 16	4 50	7 22	10 9	morn	4 55	7 16	10 2
27	M	19 8 43	4 51	7 21	10 29	0 39	4 56	7 15	10 23
28	T	18 54 51	4 52	7 20	10 52	1 15	4 56	7 14	10 46
29	W	18 48 41	4 53	7 19	11 19	1 52	4 57	7 14	11 13
30	T	18 26 11	4 54	7 18	11 51	2 31	4 58	7 14	11 46
31	F	18 11 25	4 55	7 17	morn	3 23	4 59	7 13	morn

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For JULY, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	66	66	68	73	78	80	78	80	83	82	85	86	84	82	80	76	74	72	70	—	—
2	—	—	—	60	63	64	68	78	82	82	81	80	80	80	80	78	76	75	72	73	71	70	69	—
3	—	—	—	66	67	69	73	76	81	83	84	86	84	83	82	81	78	76	74	72	71	70	69	69
4	—	—	—	70	68	66	70	70	75	78	82	83	76	71	76	77	76	73	71	68	68	66	64	—
5	—	—	—	58	58	68	76	76	80	80	80	80	80	80	80	80	75	73	70	68	66	65	63	—
6	—	—	—	62	62	67	73	82	86	86	88	88	88	88	87	81	67	71	70	71	70	—	67	—
7	—	—	—	63	64	66	65	70	78	76	78	75	76	76	76	77	75	74	72	70	68	68	66	67
8	—	—	—	64	65	—	68	70	72	72	74	78	82	80	76	72	74	72	70	69	66	66	65	—
9	—	—	—	62	61	62	64	66	68	68	72	71	71	73	72	72	71	70	67	65	64	64	62	—
10	—	—	—	60	61	62	65	64	66	68	68	71	72	72	76	75	71	68	66	64	62	62	63	—
11	—	—	—	62	63	64	70	71	79	78	80	80	80	80	79	75	—	70	70	68	68	66	65	—
12	—	—	—	64	65	66	68	70	72	76	82	83	86	88	88	88	85	84	78	66	74	72	72	—
13	—	—	—	—	—	—	76	79	84	88	89	89	90	86	79	79	80	79	77	77	74	74	73	72
14	—	—	—	—	71	72	74	80	87	88	90	90	—	90	88	86	82	80	80	78	78	78	77	76
15	—	—	—	72	73	76	86	90	93	91	90	90	94	89	86	90	89	86	85	80	78	76	75	—
16	—	—	—	68	69	72	84	87	89	90	89	90	92	92	92	88	84	82	80	79	78	76	73	—
17	—	—	—	69	70	72	83	88	90	92	93	94	96	97	98	95	92	90	87	84	84	82	80	—
18	—	—	—	73	74	76	87	93	96	95	96	98	98	99	98	97	95	92	88	86	83	83	80	—
19	—	—	72	72	72	72	80	84	78	78	81	83	83	84	77	78	76	76	74	71	69	67	66	—
20	—	—	—	60	60	62	68	78	81	82	81	81	82	84	86	84	81	78	76	72	70	68	66	65
21	—	—	—	60	61	76	76	80	83	84	83	83	86	84	86	82	79	77	74	70	69	68	66	65
22	—	—	—	—	65	70	76	81	84	85	86	86	86	88	88	86	80	78	75	74	73	72	70	—
23	—	—	—	64	64	68	70	84	86	87	88	88	88	90	90	88	82	80	78	75	74	74	71	—
24	—	—	—	68	68	71	79	84	88	89	92	92	92	95	96	94	91	88	84	82	80	79	—	—
25	—	—	—	70	70	72	80	85	88	89	91	94	96	96	96	96	92	90	84	84	81	78	76	—
26	—	—	—	70	70	72	80	85	90	91	94	95	97	97	99	97	93	91	89	87	84	82	80	—
27	—	77	—	72	72	75	83	92	93	94	98	97	100	98	99	98	96	93	90	88	85	85	—	—
28	—	—	—	73	73	—	86	92	90	94	95	96	94	97	98	97	92	90	87	86	83	81	80	—
29	—	—	—	—	75	76	77	79	76	78	75	78	84	85	82	82	81	78	77	76	77	73	73	—
30	—	—	—	—	72	74	84	89	91	89	90	90	91	95	96	95	93	87	85	84	83	82	80	80
31	73	—	—	72	70	70	73	75	80	80	82	85	85	83	84	84	82	81	78	74	73	71	70	70

☞ See note on page 53.

JULY.—THE SECOND HEATED TERM of the summer, which commenced on the 26th of last month, continued into this month to and including the 8th, with a slight perturbation of 2° on the 7th. Thunder storms were active on all the days of this term within the field of our search except the 5th. On the 8th a splendid ærolite was visible in the heavens for a long time, from the surface of a large district in the States of Tennessee and Mississippi. A third HEATED TERM commenced here on the 11th, and continued through the residue of the month and until and including the 4th day of August—its greatest intensity was 100°. On thirteen of the days the maximum temperature ranged from 90 to 100°. On the third day of the third heated term the yellow fever commenced at Forty-ninth-street, Brooklyn, the west side of Long Island.

JULY.

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8th MONTH.

AUGUST, 1857.

31 DAYS

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
Full Moon.	5	1 44 ev.	1 32 ev.	1 22 ev.	1 8 ev.	1	12 6 1
Third Qr.	12	0 57 ev.	0 45 ev.	0 35 ev.	0 21 ev.	9	12 5 12
New Moon.	19	11 42 mo.	11 30 mo.	11 20 mo.	11 6 mo.	17	12 3 47
First Quar.	27	10 21 mo.	10 9 mo.	9 59 mo.	9 45 mo.	25	12 1 50

Days of Month.	Days of Week.	Sun's decl. N.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	S	17 56 21	4 56	7 16	0 31	4 33	5 0	7 12	0 24
2	S	17 40 58	4 57	7 15	1 20	5 49	5 1	7 11	1 13
3	M	17 25 19	4 58	7 14	2 19	7 4	5 2	7 10	2 0
4	T	17 9 23	4 59	7 13	3 23	8 1	5 2	7 9	3 15
5	W	16 53 10	5 0	7 12	rises	8 47	5 3	7 8	rises
6	T	16 36 40	5 1	7 11	7 57	9 27	5 4	7 7	8 6
7	F	16 19 55	5 2	7 10	8 22	10 8	5 5	7 6	8 30
8	S	16 2 55	5 3	7 9	8 42	10 43	5 6	7 4	8 56
9	S	15 45 38	5 4	7 8	9 6	11 19	5 7	7 3	9 21
10	M	15 28 5	5 5	7 6	9 31	11 53	5 8	7 1	9 49
11	T	15 10 19	5 6	7 5	10 0	ev 24	5 9	7 0	10 20
12	W	14 52 17	5 7	7 3	10 34	1 16	5 10	6 59	10 54
13	T	14 34 1	5 8	7 2	11 19	2 2	5 11	6 58	11 41
14	F	14 15 31	5 9	7 0	morn	2 59	5 12	6 57	morn
15	S	13 56 48	5 10	6 59	0 13	4 18	5 13	6 55	0 34
16	S	13 37 51	5 11	6 58	1 18	5 50	5 14	6 54	1 41
17	M	13 18 40	5 12	6 57	2 29	7 14	5 15	6 53	2 50
18	T	12 59 17	5 13	6 55	3 44	8 17	5 16	6 52	4 1
19	W	12 39 42	5 14	6 54	sets	9 7	5 17	6 50	sets
20	T	12 19 54	5 15	6 53	7 31	9 48	5 18	6 49	7 16
21	F	11 59 55	5 16	6 51	7 52	10 25	5 19	6 48	7 41
22	S	11 39 44	5 17	6 50	8 12	10 58	5 20	6 46	8 2
23	S	11 19 23	5 18	6 49	8 31	11 30	5 21	6 45	8 24
24	M	10 59 50	5 19	6 47	8 54	morn	5 21	6 43	8 47
25	T	10 38 7	5 20	6 45	9 17	0 1	5 22	6 42	9 12
26	W	10 17 14	5 21	6 43	9 49	0 32	5 23	6 41	9 48
27	T	9 56 12	5 22	6 41	10 24	1 4	5 24	6 39	10 20
28	F	9 35 0	5 23	6 40	11 10	1 40	5 25	6 38	11 1
29	S	9 13 30	5 24	6 38	morn	2 24	5 26	6 36	11 56
30	S	8 52 9	5 25	6 36	0 4	3 36	5 27	6 34	morn
31	M	8 30 31	5 26	6 34	1 6	5 6	5 28	6 33	0 58

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For AUGUST, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	71	72	72	77	82	85	86	87	88	88	89	89	88	84	82	79	74	75	72	71	—
2	—	—	—	70	71	72	80	83	82	84	83	85	87	84	82	84	81	78	76	74	74	73	73	—
3	—	—	72	72	72	72	72	76	80	81	85	82	82	83	83	81	80	78	75	72	72	70	70	—
4	—	—	—	68	68	70	72	75	80	81	84	83	84	88	84	81	83	78	76	74	73	74	73	73
5	—	—	—	70	70	71	70	69	69	68	67	67	65	66	66	65	67	67	67	64	63	65	63	—
6	—	—	—	64	63	65	70	76	78	77	78	77	79	78	79	79	77	74	70	70	69	69	68	68
7	67	67	67	67	67	69	77	81	83	84	84	87	87	87	88	84	82	79	77	76	76	75	73	71
8	71	—	—	70	70	71	—	79	80	79	76	80	85	80	82	80	80	76	74	73	67	—	—	—
9	—	63	—	65	65	66	72	72	75	76	79	82	82	81	83	82	80	76	74	73	70	69	68	—
10	—	—	—	63	63	65	66	78	81	82	83	83	84	83	84	82	78	76	74	73	73	70	68	—
11	—	—	—	—	66	69	72	76	77	82	84	86	88	86	88	86	82	79	79	76	76	76	75	—
12	—	—	—	72	71	72	76	81	84	84	86	86	88	84	82	80	78	76	74	73	71	69	—	—
13	—	—	—	—	64	67	70	77	78	80	82	82	83	82	82	82	79	76	73	69	69	67	—	—
14	—	—	—	—	65	67	68	75	79	80	80	82	82	83	83	64	67	68	67	66	68	65	65	—
15	—	—	—	—	60	66	67	76	77	80	80	82	82	83	80	82	79	76	74	71	70	68	—	—
16	—	—	—	—	60	62	65	74	78	78	77	79	82	78	79	79	76	75	71	69	68	69	—	64
17	64	—	—	60	60	62	64	70	72	70	73	76	78	77	78	78	76	73	72	70	68	68	—	—
18	—	—	60	60	62	62	66	73	78	78	74	74	77	78	76	75	72	70	68	66	64	63	—	—
19	62	62	62	62	63	66	70	72	74	74	75	70	68	66	65	64	64	63	66	64	64	64	—	—
20	66	66	66	66	66	66	67	68	74	78	80	79	79	80	76	74	73	70	70	68	68	67	—	—
21	—	64	63	62	61	60	64	64	64	64	71	70	71	71	66	66	66	64	64	62	61	62	—	—
22	—	—	—	58	57	58	61	70	72	70	72	75	75	76	74	—	—	72	70	68	67	66	—	—
23	—	—	—	60	59	61	66	76	78	77	80	81	82	82	80	82	81	80	76	75	73	72	—	—
24	—	—	—	63	66	67	70	74	77	78	78	79	80	80	80	82	78	77	74	72	71	69	—	—
25	—	—	—	61	60	62	64	70	76	75	76	76	72	74	64	68	71	68	62	59	58	56	—	—
26	—	—	50	48	48	50	53	60	63	64	68	66	67	69	68	70	65	64	64	60	59	58	—	—
27	—	—	—	54	52	54	58	67	71	72	73	74	74	74	74	71	68	66	63	62	62	61	—	—
28	—	—	—	58	58	59	63	70	72	74	76	76	75	74	72	72	68	68	67	66	66	66	66	66
29	66	66	66	66	66	66	68	73	76	75	76	78	72	73	73	70	70	69	68	68	67	66	—	—
30	61	—	—	58	57	56	62	70	72	67	70	72	72	74	74	74	72	70	66	64	64	61	—	—
31	—	—	—	53	53	54	58	68	73	74	74	76	76	76	74	74	71	68	64	63	62	62	—	60

☞ See note on page 53.

AUGUST.—The *third heated term*, which commenced on the 11th of last month, continued to the 4th of this; both days inclusive, its duration was twenty-five consecutive days, one day overrunning twice the duration of the second, and eight times the duration of the first heated term. The third heated term was commenced by a terrific earthquake in the Caucasus on the 11th of July, and terminated by an earthquake in California on the 4th day of August. Ærolites on the 15th and 17th of July and on the 3d of August, are noticed under the head of Meteorites and Ærolites. The yellow fever continued and increased on Long Island, spreading from Forty-ninth-street, on the 13th, to Fort Hamilton, a distance of between two and three miles, in two weeks.

AUGUST.

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AUGUST.

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th MONTH. SEPTEMBER, 1857. 30 DAYS.

MOON'S PHASES.	D.	BOSTON.	N. YORK.	BALTIMORE.	CHARLESTON.	Sun on Meridian, or noonmark. D.	H. M. S.
		H. M.	H. M.	H. M.	H. M.		
ull Moon.	4	0 23 mo.	0 11 mo.	0 1 mo.	11 47 ev.	1	11 59 50
hird Qr.	10	6 6 ev.	5 54 ev.	5 44 ev.	5 30 ev.	9	11 57 7
ew Moon.	18	0 49 mo.	0 37 mo.	0 27 mo.	0 13 mo.	17	11 54 19
irst Quar.	26	4 15 mo.	4 3 mo.	3 53 mo.	3 39 mo.	25	11 51 31

	Days of Week.	Sun's decl. N.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON SETS.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	T	8 8 45	5 27	6 33	2 14	6 32	5 29	6 31	2 5
2	W	7 47 51	5 28	6 32	3 25	7 38	5 30	6 30	3 14
3	T	7 25 50	5 29	6 30	rises	8 25	5 31	6 28	4 27
4	F	7 2 41	5 30	6 29	6 47	9 7	5 32	6 27	rises
5	S	6 40 25	5 31	6 27	7 10	9 42	5 33	6 25	7 24
6	S	6 18 3	5 32	6 26	7 33	10 17	5 34	6 24	7 50
7	M	5 55 34	5 33	6 24	8 0	10 53	5 35	6 23	8 20
8	T	5 33 0	5 34	6 23	8 34	11 31	5 25	6 21	8 55
9	W	5 10 19	5 35	6 21	9 15	ev 9	5 36	6 20	9 39
0	T	4 47 34	5 36	6 19	10 7	0 49	5 37	6 18	10 30
1	F	4 24 43	5 36	6 18	11 8	1 38	5 38	6 17	11 30
2	S	4 1 47	5 37	6 16	morn	2 39	5 39	6 15	morn
3	S	3 38 47	5 38	6 14	0 18	4 13	5 40	6 13	0 41
4	M	3 15 43	5 39	6 12	1 30	5 55	5 40	6 12	1 51
5	T	2 52 35	5 40	6 10	2 43	7 13	5 41	6 10	3 0
6	W	2 29 24	5 41	6 8	3 51	8 8	5 42	6 9	4 8
7	T	2 6 10	5 42	6 7	sets	8 50	5 43	6 7	sets
8	F	1 42 53	5 43	6 5	6 16	9 26	5 44	6 5	6 8
9	S	1 19 34	5 44	6 4	6 37	9 57	5 44	6 4	6 27
0	S	0 56 12	5 45	6 2	6 56	10 27	5 45	6 2	6 49
1	M	0 32 50	5 46	6 1	7 22	10 56	5 46	6 1	7 14
2	T	0 9 26	5 47	5 59	7 48	11 25	5 47	5 59	7 42
3	W	S. 13 50	5 48	5 57	8 21	11 53	5 48	5 57	8 17
4	T	0 37 24	5 49	5 55	9 1	morn	5 49	5 55	8 57
5	F	1 0 49	5 50	5 53	9 58	0 26	5 50	5 53	9 44
6	S	1 24 14	5 51	5 52	10 50	1 2	5 51	5 52	10 42
7	S	1 47 33	5 52	5 50	11 55	1 47	5 52	5 51	11 47
8	M	2 11 2	5 53	5 49	morn	2 54	5 53	5 49	morn
9	T	2 34 25	5 54	5 47	1 4	4 30	5 54	5 47	0 53
0	W	2 57 55	5 55	5 45	2 15	6 0	5 55	5 45	2 3

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For SEPTEMBER, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	60	—	—	60	59	59	60	64	68	66	70	70	70	71	69	68	65	63	61	58	58	57	—	—
2	—	56	—	54	53	52	56	64	67	67	68	69	70	71	71	71	68	64	61	60	60	58	57	—
3	—	—	—	—	53	55	60	68	70	72	72	73	74	76	77	73	70	67	65	64	62	62	61	—
4	—	—	—	—	55	56	59	68	73	73	75	76	77	80	78	76	73	68	67	66	65	64	61	60
5	—	—	—	—	56	57	60	68	73	75	75	76	80	81	81	76	76	70	69	68	66	63	62	—
6	—	—	—	--	59	60	61	68	74	72	71	78	80	78	78	74	72	71	70	70	69	68	—	—
7	—	—	—	63	65	66	67	76	78	79	80	84	83	83	82	80	80	76	72	72	70	70	70	—
8	—	—	—	66	66	66	67	65	66	67	68	69	72	74	76	73	—	70	70	70	68	68	66	—
9	—	—	—	60	60	60	62	71	74	76	76	80	80	82	82	79	77	74	72	72	71	66	65	—
10	—	—	—	—	60	62	—	74	77	78	80	80	83	83	84	79	78	75	73	71	70	69	68	—
11	—	—	—	63	70	70	73	77	82	83	86	86	88	88	71	73	74	74	72	72	72	72	—	—
12	65	—	—	60	60	60	62	70	72	72	72	75	76	74	75	72	70	68	66	66	66	65	—	—
13	—	—	—	—	58	59	64	70	72	74	75	76	78	78	78	79	78	76	72	71	69	67	64	--
14	—	—	—	58	58	58	59	66	68	70	71	72	73	74	75	74	71	68	64	64	62	60	60	60
15	—	—	—	55	56	60	62	66	70	70	70	74	76	74	74	70	68	66	64	64	64	64	63	—
16	—	—	—	—	60	62	60	66	68	70	70	70	72	74	74	72	68	68	66	66	62	60	57	—
17	—	—	—	—	52	53	56	64	68	70	74	76	76	78	79	78	78	76	71	70	70	70	69	—
18	—	—	—	—	65	64	70	74	76	78	81	84	85	84	85	82	80	76	76	74	73	72	73	—
19	—	—	—	68	68	66	64	70	73	74	76	76	74	78	76	76	71	68	66	67	65	62	63	63
20	—	—	—	60	61	60	60	60	60	62	64	67	67	74	72	73	70	68	68	67	67	66	65	—
21	—	—	—	59	59	58	58	64	65	68	70	70	72	73	74	74	70	68	66	66	65	64	65	61
22	—	—	—	—	58	56	56	58	59	60	60	62	64	66	64	64	62	58	56	55	54	54	53	53
23	—	—	—	—	50	50	54	56	60	62	68	67	66	66	66	66	64	64	61	60	57	56	53	52
24	51	49	48	—	47	48	50	56	56	61	62	66	64	62	65	62	61	58	54	53	52	50	49	48
25	—	—	—	45	44	44	46	49	53	58	62	64	64	65	64	62	58	58	54	54	53	52	52	—
26	—	—	51	50	50	50	53	56	60	64	64	70	71	70	68	67	66	62	60	59	58	60	58	58
27	57	56	56	55	54	54	59	62	66	68	70	70	72	73	70	70	69	64	62	61	62	60	59	—
28	—	—	—	53	53	52	54	60	62	66	68	71	69	71	71	67	64	62	62	60	57	56	57	—
29	—	—	—	—	57	56	62	66	67	70	68	69	70	70	69	66	60	59	60	62	62	62	63	—
30	—	—	—	—	61	64	64	61	66	68	68	68	72	68	68	68	67	66	66	61	58	58	57	—

☞ **See note on page 53.**

SEPTEMBER.—The yellow fever continued on Long Island and extended to Governor's Island last month. It also made its appearance in Furman-street, in the thickly populated part of the city of Brooklyn, under the Heights, between the Fulton Ferry, passing the Wall-street Ferry, and extending up Joralemon-street and into Willow-place. The lowest temperature which occurred in the month was 44°, on the 25th, but this was not low enough to destroy the poison of yellow fever. There were eight days in the month in which the maximum temperature ranged from 80 to 88°, average, 83°, and seven days on which it ranged from 76 to 79°.

SEPTEMBER.

1. ______________________________
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10th MONTH. **OCTOBER, 1857.** 31 DAYS.

MOON'S PHASES.		BOSTON.	N. YORK.	BALTIMORE.	CHARLESTON.	Sun on Meridian, or noonmark.	
	D.	H. M.	H. M.	H. M.	H. M.	D.	H. M. S.
Full Moon.	3	10 25 mo.	10 13 mo.	10 2 mo.	9 49 mo.	1	11 49 32
Third Qr.	10	1 9 mo.	0 57 mo.	0 47 mo.	0 33 mo.	9	11 47 13
New Moon.	17	4 54 ev.	4 42 ev.	4 32 ev.	4 18 ev.	17	11 45 22
First Quar.	25	9 21 ev.	9 9 ev.	8 59 ev.	8 45 ev.	25	11 44 9

Days of Month.	Days of Week.	Sun's decl. S.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON SETS.	H. W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	T	3 21 4	5 56	5 43	3 27	7 9	5 56	5 44	3 16
2	F	3 44 21	5 57	5 42	rises	7 55	5 57	5 42	4 26
3	S	4 7 35	5 58	5 41	5 36	8 34	5 58	5 41	5 36
4	S	4 30 46	5 59	5 39	6 2	9 9	5 59	5 39	rises
5	M	4 53 54	6 0	5 37	6 32	9 46	6 0	5 38	6 51
6	T	5 16 58	6 1	5 36	7 13	10 26	6 1	5 37	7 34
7	W	5 39 58	6 2	5 34	8 1	11 5	6 2	5 35	8 24
8	T	6 2 58	6 3	5 33	9 2	11 48	6 3	5 34	9 23
9	F	6 25 46	6 4	5 31	10 9	ev 34	6 4	5 32	10 32
10	S	6 48 32	6 5	5 29	11 21	1 26	6 5	5 31	11 42
11	S	7 11 14	6 6	5 28	morn	2 36	6 6	5 30	morn
12	M	7 33 49	6 7	5 26	0 33	4 11	6 7	5 29	0 49
13	T	7 56 18	6 8	5 25	1 42	5 48	6 8	5 27	1 59
14	W	8 18 41	6 9	5 23	2 50	6 56	6 9	5 25	3 1
15	T	8 40 57	6 10	5 22	3 59	7 43	6 10	5 24	4 5
16	F	9 3 6	6 11	5 20	4 54	8 22	6 11	5 22	5 5
17	S	9 25 7	6 12	5 19	sets	8 55	6 12	5 20	sets
18	S	9 46 59	6 13	5 17	5 22	9 27	6 13	5 19	5 16
19	M	10 8 43	6 14	5 16	5 49	9 56	6 14	5 17	5 42
20	T	10 30 18	6 15	5 15	6 22	10 25	6 15	5 16	6 16
21	W	10 51 44	6 16	5 13	6 58	10 56	6 16	5 15	6 54
22	T	11 13 0	6 18	5 12	7 45	11 26	6 17	5 14	7 38
23	F	11 34 6	6 19	5 10	8 38	11 59	6 18	5 13	8 32
24	S	11 55 1	6 20	5 8	9 38	morn	6 19	5 12	9 34
25	S	12 15 45	6 21	5 7	10 45	0 37	6 20	5 10	10 46
26	M	12 36 17	6 22	5 5	11 54	1 22	6 21	5 9	11 44
27	T	12 56 38	6 24	5 4	morn	2 24	6 22	5 7	morn
28	W	13 16 46	6 25	5 3	1 4	3 53	6 23	5 5	0 54
29	T	13 36 42	6 26	5 2	2 14	5 17	6 24	5 4	2 2
30	F	13 56 25	6 27	5 0	3 27	6 26	6 25	5 3	3 11
31	S	14 15 54	6 28	4 59	4 41	7 16	6 26	5 2	4 23

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For OCTOBER, 1856.

Days	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	47	48	48	50	56	58	58	58	62	56	54	54	51	48	46	46	46	44	44	43
2	42	41	41	40	40	40	40	46	50	54	56	62	60	61	64	62	62	56	56	56	56	55	53	—
3	—	—	—	—	49	50	52	54	60	61	64	64	68	66	68	63	63	61	55	53	52	52	50	—
4	—	—	—	—	45	45	51	54	60	60	64	64	64	64	64	62	60	60	55	55	54	53	53	—
5	—	—	—	50	50	50	54	58	61	64	68	69	72	68	68	65	62	60	61	59	58	58	58	58
6	—	—	—	—	58	59	60	64	64	68	70	76	74	74	74	72	72	72	68	68	68	66	66	—
7	—	—	—	—	52	52	52	56	59	56	61	62	64	66	64	62	62	58	56	54	52	52	51	—
8	—	—	—	—	47	47	52	53	58	62	60	64	62	62	66	62	58	56	55	54	53	53	52	—
9	—	—	—	—	49	49	50	54	56	64	64	66	69	70	70	68	66	62	58	58	56	57	56	—
10	—	—	53	—	50	50	52	56	60	66	68	68	70	72	72	70	67	60	60	60	58	56	56	—
11	—	—	—	—	54	54	55	58	61	68	68	74	74	76	76	72	67	66	64	62	62	61	60	—
12	—	—	—	—	54	54	57	58	61	64	67	68	70	68	65	63	60	58	56	58	57	56	55	55
13	—	—	—	—	54	54	—	60	60	62	67	69	68	68	70	67	65	63	62	63	63	59	56	—
14	—	—	—	—	44	42	41	42	44	43	44	44	46	44	46	44	45	43	42	41	41	40	39	39
15	—	37	37	36	36	35	36	38	38	40	43	42	44	46	46	44	43	40	38	38	36	36	34	—
16	—	—	—	—	34	34	36	40	42	47	48	50	52	54	54	53	51	46	43	43	44	42	42	42
17	42	42	42	42	42	42	48	52	54	58	58	57	56	56	56	54	54	54	54	53	51	50	52	—
18	—	—	—	52	50	48	48	52	54	56	58	57	58	58	58	56	54	54	52	52	52	52	50	—
19	—	—	—	47	46	46	47	50	53	54	58	60	60	62	60	—	57	52	52	52	50	48	47	—
20	—	—	—	—	46	45	47	54	54	58	58	64	64	64	64	65	57	54	53	52	50	50	49	48
21	—	—	—	—	44	44	45	50	54	58	59	62	64	66	66	62	59	56	55	53	53	52	52	51
22	—	—	—	—	50	48	—	52	59	62	66	70	68	70	71	68	64	62	60	59	59	60	59	—
23	—	—	—	—	56	55	56	59	60	61	63	64	62	60	60	56	54	52	50	46	46	44	41	38
24	—	—	—	—	33	32	34	36	38	44	42	42	44	44	45	44	42	40	40	37	38	37	36	—
25	—	—	—	—	32	32	32	36	38	42	45	48	48	48	50	48	47	45	44	44	44	44	43	43
26	43	43	43	43	43	43	43	46	53	53	54	55	56	57	58	56	52	49	48	48	46	45	44	—
27	—	—	—	44	45	43	46	48	49	52	50	50	48	50	50	51	51	52	52	56	56	56	57	—
28	—	—	—	52	52	52	49	48	48	50	52	54	54	54	54	53	50	48	49	48	46	46	44	43
29	—	—	—	41	41	40	40	44	48	48	50	51	52	51	54	50	48	46	46	45	44	43	43	—
30	—	—	—	42	42	40	40	46	52	55	58	62	62	63	64	60	57	56	55	54	52	49	42	—
31	—	—	—	—	39	39	39	40	40	42	42	45	43	44	43	40	39	38	—	37	36	36	35	—

☞ See note on page 53.

OCTOBER.—On the 2d day of the month the temperature fell to 40°, but that was not low enough to cease the pestilence. On the 7th, 8th, and 9th of the month, a hot band passed St. Pauls, Minnesota, raising the temperature to 85°—on the 10th it reached Boston and Newburyport, Mass., and Portsmouth, N. H.; at Boston, temperature 80°, Newburyport, 82°, Portsmouth, 81°. On the 12th a great earthquake extended from Naples to Egypt, destroying many lives and much property. On the 15th and also on the 16th of the month, the temperature fell to 34° on Brooklyn Heights, and lower on less elevated grounds. On the last named day the yellow fever ceased on Long Island, no new cases occurring after that date.

OCTOBER.

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OCTOBER.

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31.

11th MONTH.

NOVEMBER, 1857.

30 DAYS

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.	Sun on Meridian, or noonmark. D.	H. M. S.
Full Moon.	1	8 13 ev.	8 1 ev.	7 51 ev.	7 37 ev.	1	11 43 43
Third Qr.	8	11 20 mo.	11 18 mo.	11 8 mo.	10 54 mo.	9	11 44 1
New Moon.	16	11 10 mo.	10 58 mo.	10 48 mo.	10 34 mo.	17	11 45 13
First Quar.	24	0 49 ev.	0 37 ev.	0 27 ev.	0 13 ev.	25	11 47 19

Days of Month.	Days of Week.	Sun's decl. S.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON RISES.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	S	14 35 10	6 29	4 59	rises	7 57	6 27	5 1	5 38
2	M	14 54 12	6 30	4 58	5 4	8 37	6 28	5 0	rises
3	T	15 12 50	6 31	4 57	5 48	9 19	6 29	4 59	6 12
4	W	15 31 31	6 32	4 56	6 47	10 3	6 30	4 58	7 10
5	T	15 49 48	6 33	4 55	7 56	10 47	6 31	4 57	8 18
6	F	16 7 40	6 35	4 53	9 10	11 33	6 32	4 56	9 30
7	S	16 25 34	6 36	4 52	10 23	ev 25	6 33	4 55	10 41
8	S	16 43 3	6 38	4 50	11 25	1 20	6 35	4 54	11 51
9	M	17 0 15	6 39	4 49	morn	2 27	6 36	4 53	morn
10	T	17 17 9	6 40	4 48	0 41	3 51	6 37	4 52	0 56
11	W	17 33 41	6 41	4 47	1 46	5 11	6 39	4 51	1 58
12	T	17 50 4	6 43	4 46	2 47	6 17	6 40	4 50	2 58
13	F	18 6 4	6 44	4 45	3 48	7 7	6 41	4 49	3 57
14	S	18 21 45	6 45	4 44	4 49	7 49	6 42	4 48	4 58
15	S	18 36 7	6 47	4 43	5 51	8 26	6 43	4 47	5 58
16	M	18 52 9	6 48	4 42	sets	9 0	6 44	4 46	sets
17	T	19 6 0	6 49	4 41	4 57	9 33	6 45	4 46	4 54
18	W	19 21 0	6 50	4 40	5 42	10 3	6 46	4 45	5 35
19	T	19 35 11	6 51	4 40	6 33	10 35	6 47	4 44	6 27
20	F	19 48 50	6 52	4 39	7 31	11 10	6 48	4 44	7 26
21	S	20 2 7	6 54	4 38	8 35	11 43	6 49	4 43	8 28
22	S	20 15 1	6 55	4 38	9 42	morn	6 50	4 42	9 32
23	M	20 27 34	6 56	4 37	10 49	0 22	6 51	4 42	10 40
24	T	20 39 43	6 57	4 36	11 57	1 7	6 52	4 41	11 45
25	W	20 51 30	6 58	4 36	morn	2 3	6 53	4 41	morn
26	T	21 2 52	6 59	4 35	1 4	3 8	6 54	4 41	0 53
27	F	21 13 51	7 0	4 34	2 16	4 23	6 55	4 41	2 0
28	S	21 24 26	7 1	4 34	3 31	5 29	6 56	4 40	3 12
29	S	21 34 37	7 2	4 33	4 49	6 28	6 57	4 40	4 27
30	M	21 44 23	7 4	4 33	6 12	7 20	6 58	4 40	5 42

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For NOVEMBER, 1856.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	33	32	32	36	40	44	48	50	52	54	54	52	52	52	51	50	50	50	50	—
2	—	—	—	—	45	44	46	49	53	55	—	58	62	62	62	62	58	54	53	54	54	53	51	—
3	—	—	—	—	46	46	46	50	52	54	60	58	58	60	58	55	55	55	54	56	58	60	61	—
4	—	—	—	—	59	59	59	62	64	66	68	68	64	66	66	66	64	65	64	64	57	56	54	52
5	—	—	—	—	44	44	43	42	42	42	43	46	44	48	40	40	39	36	34	34	32	32	31	30
6	—	—	—	—	28	27	28	30	32	36	38	38	40	41	40	40	36	35	34	34	34	34	33	—
7	—	—	—	—	35	34	34	38	42	47	50	52	50	52	55	52	51	51	50	50	50	50	50	—
8	—	—	—	—	52	52	53	58	58	61	62	62	62	62	60	60	58	56	50	46	45	44	43	42
9	—	—	—	—	34	34	34	36	38	41	42	43	44	43	43	41	40	38	36	35	34	34	—	33
10	—	—	—	—	30	30	30	32	34	35	37	38	40	40	40	39	39	37	35	34	34	32	31	—
11	—	—	—	27	27	26	26	28	30	34	36	38	40	42	42	40	38	38	38	37	37	36	35	34
12	34	33	32	31	30	30	30	34	38	42	44	46	46	49	50	46	43	42	43	43	42	42	42	41
13	41	40	39	37	35	34	—	38	41	44	45	46	49	48	46	44	42	41	40	40	42	41	40	40
14	39	40	40	40	40	39	39	42	44	48	50	50	49	48	46	47	44	44	44	44	44	43	42	41
15	—	—	—	37	37	35	33	34	34	37	38	42	38	39	38	38	40	34	34	33	32	32	32	32
16	32	31	31	30	30	30	32	38	43	45	—	48	50	51	51	49	46	44	43	42	44	44	43	42
17	42	42	42	42	40	38	37	37	38	41	42	42	43	42	42	40	38	37	38	35	35	34	32	32
18	32	31	31	31	32	32	32	34	38	38	40	40	42	42	40	38	38	37	37	36	35	35	34	33
19	33	32	32	32	32	31	31	34	36	38	40	42	44	44	43	43	40	39	37	35	35	33	32	—
20	—	—	—	—	29	28	28	30	32	34	37	38	39	40	39	38	36	35	35	34	34	34	33	32
21	31	30	29	28	28	28	28	30	34	39	43	46	48	46	44	44	44	44	44	44	44	46	46	46
22	48	49	50	51	51	51	52	54	54	56	54	54	54	55	54	52	48	47	44	44	44	42	42	42
23	41	40	39	38	36	36	36	38	39	44	46	46	48	46	45	44	42	42	43	44	44	44	45	45
24	—	—	—	—	44	44	44	45	46	47	49	52	52	56	56	52	52	50	50	50	50	49	47	46
25	47	44	42	41	40	40	40	42	42	44	46	47	48	48	46	43	43	44	44	45	46	46	46	46
26	47	47	48	40	47	49	49	50	52	52	52	54	56	54	54	53	50	48	46	46	44	42	41	40
27	—	—	—	37	37	38	38	38	40	43	43	45	44	45	43	42	40	40	38	38	38	37	35	34
28	34	34	34	33	32	32	32	34	36	40	40	42	44	45	44	42	42	42	40	41	41	40	40	39
29	35	33	32	32	31	31	31	32	31	34	34	35	36	32	32	32	31	32	32	30	31	30	31	30
30	30	30	30	30	30	30	30	30	32	33	38	39	40	40	40	38	36	34	34	33	32	32	32	32

☞ See note on page 53.

NOVEMBER.—The highest temperature in this month, was on the 4th, 68°. I was in Montreal, Lower Canada, on that day—the temperature at night fell suddenly, and was attended by a great wind, which did much damage over an extensive surface. On the banks of the Au Sable river the temperature on the morning of the 6th fell to within 17° of zero at Keeseville, New York. Meteors that evening. Frost in Texas. On the 11th the lowest temperature on Brooklyn Heights was 26°—the lowest in the month. On sixteen several days this month the temperature has been at and below the freezing point.

NOVEMBER.

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12th MONTH. DECEMBER, 1857. 31 DAYS.

MOON'S PHASES.	D.	BOSTON. H. M.	N. YORK. H. M.	BALTIMORE. H. M.	CHARLESTON. H. M.
Full Moon.	1	6 13 mo.	6 1 mo.	5 51 mo.	5 37 mo.
Third Qr.	8	1 54 mo.	1 42 mo.	1 32 mo.	1 18 mo.
New Moon.	16	6 17 mo.	6 5 mo.	5 55 mo.	5 41 mo.
First Quar.	24	1 52 mo.	1 40 mo.	1 30 mo.	1 16 mo.
Full Moon.	30	4 49 ev.	4 37 ev.	4 27 ev.	4 13 ev.

Sun on Meridian. D.	H. M. S.
1	11 49 24
9	11 52 45
17	11 56 5
25	12 0 34

Days of Month.	Days of Week.	Sun's decl. S.	CALENDAR FOR N. YORK CITY, Philadel., Conn., N. Jersey, Penn., Ohio, Indiana, and Illinois.				CALENDAR FOR WASHINGTON, and serving for Maryland, Va., Kentucky, Mo., and California.		
			SUN RISES.	SUN SETS.	MOON RISES.	H.W. N. Y.	SUN RISES.	SUN SETS.	MOON R. & S.
		° ′ ″	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	T	21 53 44	7 5	4 34	rises	8 11	6 59	4 40	rises
2	W	22 2 40	7 6	4 34	5 32	8 59	7 0	4 39	5 54
3	T	22 11 10	7 7	4 34	6 46	9 49	7 1	4 39	7 10
4	F	22 19 15	7 8	4 33	8 2	10 37	7 2	4 39	8 24
5	S	22 26 53	7 9	4 33	9 18	11 30	7 3	4 38	9 36
6	**S**	22 34 6	7 10	4 33	10 29	ev 10	7 4	4 38	10 47
7	M	22 49 52	7 11	4 33	11 57	1 11	7 5	4 38	11 51
8	T	22 47 7	7 12	4 33	morn	2 6	7 6	4 38	morn
9	W	22 53 3	7 13	4 33	0 49	3 4	7 7	4 38	0 52
10	T	22 58 31	7 14	4 33	1 41	4 12	7 8	4 38	1 51
11	F	23 3 27	7 15	4 33	2 42	5 14	7 9	4 38	2 51
12	S	23 7 57	7 15	4 33	3 45	6 14	7 10	4 39	3 51
13	**S**	23 12 0	7 16	4 33	4 47	7 11	7 10	4 39	4 53
14	M	23 15 35	7 17	4 34	5 40	7 53	7 11	4 39	5 54
15	T	23 18 42	7 17	4 34	6 51	8 35	7 11	4 39	sets
16	W	23 21 21	7 18	4 34	sets	9 11	7 12	4 39	4 25
17	T	23 23 32	7 18	4 34	5 26	9 49	7 12	4 40	5 20
18	F	23 25 15	7 19	4 35	6 29	10 25	7 13	4 40	6 21
19	S	23 26 30	7 19	4 35	7 34	10 59	7 13	4 40	7 25
20	**S**	23 27 16	7 20	4 36	8 41	11 35	7 14	4 41	8 30
21	M	23 27 36	7 20	4 36	9 46	morn	7 14	4 41	9 37
22	T	23 27 24	7 21	4 37	10 53	0 13	7 15	4 42	10 42
23	W	23 26 45	7 21	4 37	morn	0 54	7 15	4 42	11 47
24	T	23 25 38	7 22	4 38	0 2	1 49	7 16	4 43	morn
25	F	23 24 3	7 22	4 38	1 11	2 :9	7 16	4 43	0 54
26	S	23 21 59	7 23	4 39	2 24	3 27	7 17	4 44	2 4
27	**S**	23 19 27	7 23	4 39	3 42	4 33	7 17	4 45	3 19
28	M	23 16 28	7 24	4 40	5 1	5 44	7 18	4 45	4 33
29	T	23 13 0	7 24	4 40	6 20	6 51	7 18	4 46	5 48
30	W	23 9 5	7 25	4 41	rises	7 52	7 19	4 47	rises
31	T	23 4 41	7 25	4 42	5 35	8 47	7 19	4 48	5 56

TABLE OF TEMPERATURE—HOURLY OBSERVATIONS.

BY E. MERIAM, BROOKLYN HEIGHTS, L. I.

For DECEMBER, 1855.

Days.	MORNING HOURS.												EVENING HOURS.											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	31	30	30	30	29	28	28	32	34	37	40	41	43	44	41	42	40	40	40	38	36	36	35	35
2	34	34	34	34	34	34	33	36	36	40	39	41	46	44	44	46	44	42	41	41	41	43	41	41
3	40	39	39	37	36	36	36	38	40	42	44	44	44	44	42	42	40	38	38	36	37	34	34	33
4	32	32	32	31	31	30	30	32	34	38	41	42	42	42	42	41	40	39	40	38	38	38	38	37
5	36	36	35	34	34	32	32	34	36	38	42	44	44	44	44	42	39	40	38	36	35	34	35	34
6	32	32	31	30	31	30	31	34	36	40	41	44	44	46	46	42	40	40	38	39	40	38	35	34
7	34	33	33	33	34	33	33	36	40	42	44	44	44	46	45	41	39	36	36	35	33	33	32	31
8	30	29	28	28	27	27	26	28	30	32	35	—	40	40	40	38	36	36	36	35	36	34	33	34
9	34	34	35	35	35	37	40	42	46	48	49	50	51	52	52	53	54	53	53	46	44	44	43	42
10	41	41	39	38	37	36	35	36	36	40	37	37	38	36	36	34	34	32	32	31	30	30	29	29
11	29	29	29	29	25	28	26	28	28	28	29	30	30	30	30	30	29	29	28	28	26	26	26	25
12	24	24	24	24	23	23	23	24	25	27	29	30	30	31	30	29	28	28	28	28	28	28	28	28
13	28	28	28	28	25	26	25	28	31	32	33	32	32	32	32	31	30	30	30	30	30	30	28	27
14	26	25	25	24	24	22	22	24	25	28	29	30	30	31	30	30	30	30	30	30	30	30	30	31
15	32	32	34	34	34	36	37	38	38	39	40	40	40	41	40	40	40	39	38	38	38	38	38	38
16	38	38	38	38	38	38	38	38	38	40	41	42	43	49	50	52	48	48	50	47	47	48	47	46
17	45	44	43	42	41	39	38	38	40	42	44	45	46	47	45	42	41	40	40	39	38	38	38	37
18	36	34	34	33	32	31	31	32	34	36	38	37	36	38	37	36	34	34	34	32	30	30	30	29
19	28	27	26	25	26	26	26	28	28	30	31	32	32	32	32	31	30	30	30	29	30	29	29	28
20	27	27	27	27	24	23	22	24	26	28	28	29	30	31	31	32	30	28	28	27	26	26	26	25
21	24	24	24	24	22	24	24	26	29	34	38	38	39	40	39	39	38	38	38	38	38	38	38	38
22	37	36	36	35	35	36	36	36	37	38	40	39	40	40	41	43	44	46	48	48	50	50	50	49
23	48	48	48	48	47	46	46	44	46	47	47	48	48	48	48	46	45	45	46	44	44	44	43	42
24	42	41	41	41	44	44	43	41	40	38	38	38	38	37	36	35	34	34	33	32	32	31	31	31
25	31	31	32	32	32	31	31	32	33	34	36	32	34	34	34	34	34	36	36	35	34	34	34	34
26	34	34	34	34	34	34	27	26	24	26	26	27	28	26	26	26	26	24	22	20	20	18	18	17
27	16	15	14	13	13	12	12	13	15	18	20	22	22	21	22	22	20	19	18	18	18	19	20	20
28	20	20	20	20	22	23	24	25	27	27	29	30	30	30	28	29	28	28	28	26	24	22	21	21
29	20	20	19	19	18	16	16	16	17	18	20	20	20	20	19	19	16	16	16	20	22	23	23	25
30	26	27	27	27	27	26	26	24	24	24	26	28	28	28	26	26	24	24	23	22	20	20	19	18
31	18	18	17	17	16	16	16	16	18	20	22	25	24	22	26	22	21	20	22	22	23	20	20	21

NOTE.—The figures in the first column, on the left of the above table, denote the days of the month; the figures running from left to right give the state of the thermometer for every hour in the twenty-four.

A COLD TERM commenced on Brooklyn Heights on the 26th, between the hours of 6 and 7 A. M., when the temperature fell from 34° (which is 2° above the freezing point of Fahrenheit) to 27°, 5° below that line. Preceding the commencement of this *cold term* it will be seen by the hourly records that the temperature was *in-equilibrio* ten consecutive hours, at 34°, when it suddenly fell 7°, and continued below the freezing line the remainder of the month. This *cold term*, commenced *north*, at a point west of my place of observation, several days before it reached here, and *west* at Waverly, Missouri, on the evening of the 22d—the same time the brig *Geranium*, in lat. 36°, long. 72° was struck by lightning. Rain fell on the night of 29th 30th, from 10 P. M. to 2 A. M., while the temperature was from 5° to 9° below the freezing line.

DECEMBER.

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POPULATION OF THE UNITED STATES IN 1850.

States.	White population.	Free colored pop.	Total Free.	Slaves.
Maine	581,813	1,356	583,169	
New Hampshire	317,456	520	317,976	
Vermont	313,402	718	314,120	
Massachusetts	985,450	9,064	994,514	
Rhode Island	143,875	3,670	147,545	
Connecticut	363,099	7,693	370,792	
New York	3,048,325	49,069	3,097,394	
New Jersey	465,513	23,820	489,333	222
Pennsylvania	2,258,463	53,323	2,311,786	
Delaware	71,169	18,073	89,242	2,290
Maryland	417,943	74,723	492,666	90,368
Virginia	894,800	54,333	949,133	472,528
North Carolina	553,028	27,463	580,491	288,548
South Carolina	274,567	8,956	283,523	384,984
Georgia	521,572	2,931	524,503	381,682
Florida	47,211	924	48,135	39,309
Alabama	426,486	2,293	428,779	342,892
Mississippi	295,718	930	296,648	309,878
Louisiana	255,491	17,462	272,953	244,809
Texas	154,034	397	154,431	58,161
Arkansas	162,189	608	162,797	47,100
Tennessee	756,753	6,401	763,154	239,460
Kentucky	761,417	10,007	771,424	210,981
Missouri	592,004	2,618	594,622	87,422
Ohio	1,955,108	25,319	1,980,427	
Michigan	395,097	2,557	397,654	
Indiana	977,628	10,788	988,416	
Illinois	846,035	5,435	851,470	
Wisconsin	304,758	633	305,391	
Iowa	191,879	335	192,214	
California	91,632	965	92,597	
	19,423,915	423,384	19,847,801	3,200,634
District of Columbia	38,027	9,973	48,000	3,687
Minnesota	6,038	89	6,077	
New Mexico	61,530	17	61,547	
Oregon	13,088	206	13,294	
Utah	11,330	24	11,354	26
Total	19,553,923	433,643	19,987,578	3,204,347

LIBRARY OF THE UNIVERSITY OF MICHIGAN

BEGINNING OF THE SEASONS.

1856.—Sun enters Capricornus (Winter begins), Sunday, Dec. 21, at 9 o'clock 43 minutes, A. M.

1857.—Sun enters Aries (Spring begins), Friday, March 20, at 10 o'clock 37 minutes, A. M.

" " Cancer (Summer begins), Sunday, June 21, at 7 o'clock 18 minutes, A. M.

" " Libra (Autumn begins), Tuesday, Sept. 22, at 9 o'clock 25 minutes, P. M.

" " Capricornus (Winter begins), Monday, Dec. 21, at 3 o'clock 9 minutes, P. M.

DURATION OF THE SEASONS, ETC., FOR 1857.

The sun will be in the

Winter signs	89	days	1	hour	6	minutes.
Spring	"	92	"	20	"	41	"
Summer	"	93	"	14	"	7	"
Winter	"	89	"	17	"	44	"

So that the period of Summer is 4 days 13 hours and 1 minute longer than that of Winter; 17 hours and 26 minutes longer than that of Spring; and 3 days 20 hours and 23 minutes longer than that of Autumn.

The Sun will be north of the Equator (comprising the periods of Spring and Summer) 186 days 10 hours and 48 minutes.

The Sun will be south of the Equator (comprising the periods of Summer and Winter) 178 days 18 hours and 50 minutes. So that the Sun will be north of the Equator 7 days 15 hours and 53 minutes longer than it will be south.

The length of the Tropical year (1857) is 365 days 5 hours and 48 minutes.

ECLIPSES IN THE YEAR 1857.

There will be two Eclipses this year, both of the Sun.

The first is an Eclipse of the Sun, and will occur on the 25th of March. It will be *invisible* in all that part of the United States *east* of the meridian of Washington, or of longitude 77° west of Greenwich, and partial and visible *west* of Washington.

The Eclipse will begin at sunset at the following places: Rochester, Harrisburg, Washington, Richmond, and Wilmington, N. C. The Eclipse will be at the largest at the following cities: New Orleans, Memphis, Springfield, Ill., Chicago, and Milwaukee, at the instant of sunset. The Eclipse in the United States will vary in size from a mere contact of limb to 9.75 digits. It will be largest along the Mississippi river. At Washington the Sun will set partially eclipsed. From Washington west to the Mississippi, the time of the Eclipse will vary from 2 or 3 minutes to 45 minutes *before* sunset. The total Eclipse will commence at sunrise in Australia, in longitude 141° 18′ east of Greenwich, and latitude 34° 19′ south; and will end at sunset in the Gulf of Mexico, in latitude 24° north, and longitude 90° 41′ west of Greenwich. This Eclipse, therefore, will be visible throughout the whole of California, and in most of the southern, western, and middle States.

The second is an *annular* Eclipse of the Sun, which will commence on the 17th of September, at midnight in the United States. It will be visible in a large portion of Asia, a part of Africa, and in the whole of Australia. It will be invisible in the United States.

MORNING AND EVENING STARS.

Until May 10th, Venus will be the Evening Star, then Morning Star the balance of the year. Until June 7th, Mars will be the Evening Star, then Morning Star the remainder of the year. Until April 11th, Jupiter will be the Evening Star, then Morning Star until November 3d. Saturn will be the Evening Star until July 10th, then Morning Star the balance of the year.

MERCURY.

This planet will be visible in the west soon after sunset, on or about January 12th, May 5th, September 1st, and December 26th; in the east it will be visible before sunrise, about February 28th, June 29th, and October 19th.

ROSSE'S TELESCOPE.

To obtain some idea of the immensity of the universe, let us look through Lord Rosse's telescope, and we discover a star in the infinite depth of space, whose light is 3,500,000 years in traveling to our earth, moving at the velocity of 12,000,000 of miles in one minute.

THE MILKY-WAY.

The number of telescopic stars in the milky-way is estimated at eighteen millions. In order, I will not say to realize the greatness of this number, but, at any rate, to compare it with something analogous, I will call attention to the fact, that there are not in the whole heavens more than about eight thousand stars visible to the naked eye. HUMBOLDT.

THE ASTEROIDS.

M. Leverrier states, in a letter to the French Minister of Public Instruction, that he is firmly persuaded that a great number of small planets are situated between Mars and Jupiter, and that before 1860 nearly 100 will probably be discovered.

ZODIACAL LIGHT.

It is said that one of the incidental results of the Japan expedition is the discovery that the Zodiacal Light is a belt extending entirely round the earth, after the manner of Saturn's rings. The matter has excited a good deal of interest among astronomers, some of the ablest of whom seem to consider the fact established by the observations taken.

THE CALENDAR.

CHRONOLOGICAL CYCLES.

Dominical Letter	D	Golden Number	15
Lunar Cycle	15	Solar Cycle	18
Epact	4	Roman Indiction	15
Julian Period	6571	Age of the World	5860

MOVABLE FEASTS AND FASTS FOR 1857.

JAN. 1, Circumcision; 4, 2d S. aft. Christmas; 6, Epiphany; 11, 1st S. aft. Epiphany; 18, 2d S. aft. Epiphany; 25, 3d S. aft. Epiphany, and Conv. of St. Paul. FEB. 1, 4th S. aft. Epiphany; 2, Purif. of Vir. Mary; 8, Septuagesima S.; 15, Sexagesima S.; 22, Quinquagesima S.; 24, St. Matthias; 25, Ash-Wednesday. MARCH 1, 1st S. in Lent; 8, 2d S. in Lent; 15, 3d S. in Lent; 22, 4th S. in Lent; 25, Annun. of Vir. Mary; 29, 5th S. in Lent. APRIL 5, S. before Easter; 10, Good-Friday; 11, Easter-even; 12, Easter Sunday; 19, 1st S. aft. Easter; 25, St. Mark; 26, 2d S. aft. Easter; MAY 1, Sts. Philip and James; 3, 3d S. aft. Easter; 10, 4th S. aft. Easter; 17, 5th S. aft. Easter; 21, Ascension-day; 24, S. aft. Ascension; 31, Whit-Sunday. JUNE 7, Trinity Sunday; 11, St. Barnabas; 14, 1st S. aft. Trin.; 21, 2d S. aft. Trin.; 24, Nativ. of St. John the Baptist; 28, 3d S. aft. Trin.; 29, St. Peter. JULY 5, 4th S. aft. Trin.; 12, 5th S. aft. Trin.; 19, 6th S. aft. Trin.; 25, St. James; 26, 7th S. aft. Trin. AUG. 2, 8th S. aft. Trin.; 9, 9th S. after Trin.; 16, 10th S. aft. Trin.; 23, 11th S. aft. Trin.; 24, St. Bartholomew; 30, 12th S. aft. Trin. SEPT. 6, 13th S. aft. Trin.; 13, 14th S. aft. Trin.; 20, 15th S. aft. Trin.; 21, St. Matthew; 27, 16th S. aft. Trin.; 29, St. Michael and All Angels. OCT. 4, 17th S. aft. Trin.; 11, 18th S. aft. Trin.; 18, 19th S. aft. Trin., and St. Luke Evan.; 25, 20th S. aft. Trin.; 28, St. Simon and Jude. NOV. 1, 21st S. aft. Trin., and All Saints; 8, 22d S. aft. Trin.; 15, 23d S. aft. Trin.; 22, 24th S. aft. Trin.; 29, 1st S. in Advent; 30, St. Andrew. DEC. 6, 2d S. in Advent; 13, 3d S. in Advent; 20, 4th S. in Advent; 21, St. Thomas; 25, Christmas; 26, St. Stephen; 27, 1st S. aft. Christmas, and S John Evan.; 28, Innocents.

COMPARISON WITH ANCIENT ERAS.

The year 1857, according to the Mohammedan theory of time, is the 1273d since the Hegira or flight of Mohammed.

The Alphonsine tables make the year 1857 the 7091st from the creation; the Greek church makes it 7365; and some of the other Eastern churches make it 7381. The Chinese adopt the Sexagenary cycle of 60 years, giving a name to each year; and as 75 cycles have now passed away (their era commencing in 2700 B. C.), they deem themselves now in the year 4557.

The year 1857 is the year 4958, according to the Hindoo era of the Caliguy.

The Mexican era dates the year 1857 as 2947, only commencing 1090 B. C.

According to the Talmud, the year 1857 is the 7202d year since the creation; to the Septuagint the 7729th; to the Samaritan Pentateuch the 6567th; Dr. Hales, the chronologist, makes it the 7268th; and the Catholic church, following the best authorities, designates it as the 5860th year since the creation, and 1857th since the birth of Christ.

The year 1857 is the 2610th year from the foundation of Rome according to Varro.

The year 1857 is the latter part of the 81st, and the beginning of the 82d year of the Independence of the United States of America.

The Jewish year 5618 commences September 19, 1857.

CALENDAR OF THE JEWS, FOR THE YEAR 1857.

Year.	Names of Months.			
5317.	Thebet, (begins)	Dec.	27,	1856.
“	“ 10th. Fast for the Siege of Jerusalem	Jan.	6,	1857.
“	Sebat, (begins)	Jan.	26,	“
“	Adar, (begins)	Feb.	24,	“
“	“ 13th. Fast of Esther	Mar.	9,	“
“	“ 14th. Purim	Mar.	10,	“
“	“ 15th. Schuscan Purim	Mar.	11,	“
“	Nisan, (begins)	Mar.	26,	“
“	“ 15th. Beginning of the Passover	April	9,	“
“	“ 16th. Second Feast, or morrow of the Passover	April	10,	“
“	“ 21st. Seventh Feast	April	15,	“
“	“ 22d. End of Passover	April	16,	“
“	Iyar, (begins)	April	24,	“
“	“ 18th. Lag Laomer	May	12,	“
“	Sivan, (begins)	May	24,	“
“	“ 6th. Feast of Weeks of Pentecost	May	29,	“
“	“ 7th. Second Feast	May	30,	“
“	Thammus, (begins)	June	22,	“
“	“ 18th. Fast for the taking of the Temple	July	9,	“
“	Ab, (begins)	July	22,	“
“	“ 9th. Fast for the burning of the Temple	July	30,	“
“	Ab-Elul, (begins). *The last Month of the Jewish Year*	Aug.	20,	“
5618.	Tisri, (begins). Feast for the New Year,	Sept.	19,	“
“	“ 2d. Second Feast for the New Year	Sept.	20,	“
“	“ 3d. Feast of Gedaljah	Sept.	21,	“

5618.	Tisri, 10th. Fast of the Reconciliation or Atonement	Sept.	28,	1857.
"	" 15th. Feast of the Huts or Tabernacles	Oct.	3,	"
"	" 16th. Second Feast of the Huts	Oct.	4,	"
"	" 21st. Feast of Palms or Branches	Oct.	9,	"
"	" 22d. End of the Hut or Congregation Feast	Oct.	10,	"
"	" 23d. Rejoicing for the Discovery of the Law	Oct.	11,	"
"	Marchesvan, (begins)	Oct.	18,	"
"	Chisleu, (begins)	Nov.	17,	"
"	" 25th. Consecration of the Temple	Dec.	12,	"
"	Thebet, (begins)	Dec.	17,	"
"	" 10th. Fast for the Siege of Jerusalem	Dec.	27,	"

The Jewish year generally contains 354 days, or 12 lunations of the moon; but in a cycle of 19 years an intercalary month (Veader) is 7 times introduced for the purpose of rendering the average duration of the year nearly or quite correct.

THE GREGORIAN YEAR, AND OLD AND NEW STYLE.

In the year 1752 the new, or Gregorian style, which makes the year commence January 1st, was introduced. The civil or legal year in England formerly commenced on the 25th of March. As some nations before 1752 had adopted the new style, it was usual for English writers to designate both years, if the event occurred before the 25th of March. Thus we have Washington's birth-day designated February 11th, 1731–2; which signifies that if the year commenced the 25th of March, it would be February 11, 1731. If the year commenced January 1st, it would be February 11, 1732, old style, or February 22d, 1732, new style.

TIDE TABLE.

To find out the time of high water at any of the following places, first ascertain the time of high water in New York, then add or subtract the following time:

		H.M.			H.M.
Albany	add	6 34	Norfolk	sub.	1 41
Annapolis, Md.	sub.	1 51	Plymouth	add	2 19
Annapolis, N. S.	add	1 49	Portland	"	1 39
Amboy	sub.	0 39	Portsmouth	"	2 9
Baltimore	add	5 7	Providence	sub.	0 41
Bridgeport	"	2 7	Quebec, Can	add	8 49
Eastport	"	2 9	Richmond	sub.	2 25
Halifax, N. S.	sub.	2 15	Salem	add	2 19
Hell Gate	add	1 41	Sandy Hook	sub.	0 50
New Bedford	sub.	1 40	St. John, N. B.	add	2 49
New Haven	add	2 04	Sunbury	"	0 19
New London	sub.	0 21	Windsor	"	2 49
Newport	"	1 55	Marblehead	"	1 49

The above table is liable to be influenced by the wind.

THE PERIODICAL REVOLUTIONS, DISTANCES FROM THE SUN, ETC., OF THE PLANETS.

Names of the Planets.	Time of periodical Revolution.				Mean dist. from the Sun in Eng. miles.	Time of Rotation upon Axis.			Diameter in Eng. Miles.
	YRS.	D.	H.	M.		D.	H.	M.	
Mercury	0	87	23	15	36,890,000	1	0	5	2,950
Venus	0	224	16	49	68,770,000	0	23	21	7,900
Earth	1	0	5	48	95,298,260	0	23	56	7,912
Moon	0	27	7	43	95,298,260	27	7	43	2,160
Mars	1	321	22	18	145,205,000	1	0	37	4,500
Flora	3	98			209,826,000				
Melpomene	3	180			218,900,000				
Victoria	3	207			222,273,000				
Vesta	3	229			225,000,000				
Iris	3	248			227,334,000				
Metis	3	253			227,387,000				
Hebe	3	284			230,000,000				
Parthenope	3	285			231,200,000				
Fortuna	3	302			233,100,000				
Massilia	3	305			233,400,000				
Thetis	3	341			237,400,000				
Astræa	4	52			245,600,000				
Egeria	4	53			245,800,000				
Irene	4	55			246,070,000				
Lutetia	4	75			248,250,000				
Eunomia	4	114			252,300,000				
Juno	4	131			254,312,000				
Thalia	4	166			258,000,000				
Ceres	4	220			263,713,000				
Pallas	4	227			264,256,000				
Psyche	5	9			279,500,000				
Calliope	5	16			280,300,000				
Hygeia	5	189			297,530,000				
Jupiter	11	315	14		495,917,000	0	9	55	88,780
Saturn	29	164	7		909,026,000	0	10	16	77,230
Uranus	83	294	8		1,828,071,000				35,000
Neptune	164½				2,862,457,000				31,000

The time of the sun's rotation on his axis is 25 d. 7 h. 48 m., and his diameter is 887,076 miles.

TRUE TIME.

The Sun is on the meridian at 12 o'clock on four days only in the year. It is sometimes as much as 16½ minutes before or after 12, when its shadow strikes the noon-mark on the sun-dial. On each calendar page of this Almanac is shown the exact time when the Sun reaches the meridian, or the shadow the noon-mark; and in order to set a clock or watch correctly, it must, when it is noon by the sun-dial or noon-mark, be set at the time indicated in the Almanac. Thus, on the 25th of January, when the Sun is on the noon-mark the watch must be set 12 minutes and 38 seconds past twelve, which will be the true time. The practice of setting time-pieces by the rising or the setting of the Sun or Moon is not strictly correct; as the unevenness of the earth's surface and intervening objects, such as hills or forests, near the points of rising and setting, occasion a deviation, in every place, from the time expressed in the Almanac, which time is adapted to a smooth, level horizon. The only means of keeping correct time is by the use of a noon-mark, or a meridian line.

PHENOMENA, ETC., FOR 1857.

JANUARY 1, ⊙ in perigee; 2, ♃ ☌ ☽; 5, ☽ perigee; 9, ♄ ☌ ☽; 15, ☿ gr. elong. E.; 17, ☽ apogee; 21, ☿ stat.; 28, ☽ ☌ ♂, ♅ stat.; 29, ☽ ☌ ♀; 30, ☽ ☌ ♃, ☽ perigee; 31, ☿ inf. ☌ ⊙. FEB. 5, ☽ ☌ ♄; 8, Septuagesima; 9, ♅ □ ⊙; 12, ♀ ☌ ♃; 14, ☽ apogee; 22, Quinquagesima; 25, Ash-Wednesday, ☿ gr. elong. W.; 26, ☽ ☌ ♂ ♃; 27, ♀ gr. elong. E., ☽ ☌ ♀. MARCH 1, Quadragesima; 8 ♄ stat.; 14, ☽ apogee, ♂ ☌ ♃; 26, ☽ perigee, ☽ ☌ ♃; 27, ☽ ☌ ♂; 28, ♄ □ ⊙, ♀ ☌ ☽; 31, ☽ ☌ ♄. APRIL 4, ♀ brightest; 10, Good Friday, ☽ apogee, ☿ sup. ☌ ⊙; 11, ♃ ☌ ⊙; 12, Easter Sunday; 18, ♀ stat.; 21, ☿ ☌ ♂; 24, ☽ perigee, ☽ ☌ ♂; 25, ☽ ☌ ♀ ♅; 27, ☿ ☌ ♅ ♀; 28, ♄ ☌ ☽; 29, ☌ ♀ ♅. MAY 3, ♀ ☌ ♂; 6, ♂ ☌ ♅; 7, ☽ apogee; 8, ☿ gr. elong. E.; 10, ♀ in inf. ☌ ⊙; 15, ♅ ☌ ⊙; 17, Rogation; 20, ☿ stat.; 21, Ascension-day, ☽ ☌ ♃; 22, ☽ perigee, ☽ ☌ ♀; 23, ☽ ☌ ♅ ♂; 24, ☽ ☌ ☿; 26, ☽ ☌ ♄; 30, ♀ stat.; 31, Pentecost. JUNE 1, ♀ inf. ☌ ⊙; 4, ☽ apogee; 7, Trinity Sunday, ♂ ☌ ⊙; 13, ☿ stat., ♀ brightest; 18, ☽ ☌ ♃, ☽ ☌ ♀; 19, ☽ ☌ ♅, ☽ perigee; 22, ☽ ☌ ♄; 26, ☿ gr. elong. W.; 29, ♀ in aph. JULY 1, ⊙ apogee, ☽ apogee; 3, ♀ ☌ ♅; 10, ♄ ☌ ⊙; 14, ☿ ☌ ♂; 15, ☽ ☌ ♃; 17, ☽ ☌ ♀, ☽ perigee; 18, ☿ ☌ ♄; 19, ☿ gr. elong. W.; 20, ☽ ☌ ♂, ♄ ☿; 24, ☿ sup. ☌ Sun; 27, ♂ ☌ ♄; 29, ☽ apogee. AUG. 7, ♃ □ ⊙; 12, ☽ ☌ ♃, perigee; 15, ☽ ☌ ☿; 16, ☽ ☌ ♄; 17, ☽ ☌ ♄; 21, ☽ ☌ ☿; 22, ♅ □ ⊙; 26, ☽ apogee; 29, ☿ ☌ ♄, ☿ aph. SEPT. 4, ♃ stat.; ♅ stat., ☿ gr. elong. E.; 7, ☽ perigee; 8, ☽ ☌ ♃; 13, ☽ ☌ ♄; 14, ☌ ☽ ☿; 15, ☽ ☌ ♂; 18, ☿ stat.; 19, ☽ ☌ ☿; 23, ☽ apogee; 30, ♀ ☌ ♂. OCT 1, ☿ inf. ☌ ⊙; 4, ☽ perigee, ☌ ♃; 9, ☿ stat.; 10, ☽ ☌ ♄; 14, ☽ ☌ ♀ ♂; 16, ☿ gr. elong. W.; 19, ♀ in perihelion; 20, ☽ in apogee; 21, ♄ □ ⊙. NOV. 1, ☽ ☌ ♃; 2, ☽ in perigee; 3, ♃ ☍ ⊙; 7, ☽ ☌ ♄; 9, ♄ stat.; 11, ☽ ☌ ♂; 14, ☽ ☌ ♀; 16, ☽ ☌ ☿; 17, ☽ in apogee; 19, ☿ sup. ☌ ⊙, ♅ ☍ ⊙; 20, ♂ in aph.; 29, Advent Sunday, ☽ ☌ ♃; 30, ☽ ☌ ♅. DEC. 1, ☽ perigee; 4, ☽ ☌ ♄; 10, ☌ ☽ ♂; 14, ☽ ☌ ♀, ☽ in apogee; 17, ☽ ☌ ☿; 26, ☽ ☌ ♃; 27, ☽ ☌ ♅; 29, ☿ gr. elong. E., ☽ in perigee; 31, ♃ stat., ⊙ in perigee, ☽ ☌ ♄.

CHARACTERS.

⊙ Sun; ☽ Moon; ☿ Mercury; ♀ Venus; ⊕ Earth; ♂ Mars; ♃ Jupiter; ♄ Saturn; ♅ Uranus; ☌ same longitude, or near each other; □ 90° apart; ☍ opposition, or 180° apart.

SIGNS OF THE ZODIAC.—♈ Aries; ♉ Taurus; ♊ Gemini; ♋ Cancer; ♌ Leo; ♍ Virgo; ♎ Libra; ♏ Scorpio; ♐ Sagittarius; ♑ Capricorn; ♒ Aquarius; ♓ Pisces.

Aspects and Nodes.—☌ Conjunction; ⚹ Sextile, 60 degrees; □ Quartile, 90 degrees; △ Trine, 120 degrees; ☍ Opposition, 180 degrees; ☊ Ascending Node; ☋ Descending Node.

THE ATMOSPHERE.

The Globe which we inhabit is everywhere surrounded by a thin, invisible, elastic fluid, called the air or atmosphere. It has been estimated that the gravity of our earth can not extend to a greater altitude than 45 miles above the level of the sea. The greatest elevation is in the equatorial or warmest region of the earth.

Air, when the barometer stands at 30 inches, and the thermometer at 60o (which is always understood in general estimates), is 828 times lighter than water.

The mean pressure of the atmosphere seems to have undergone no change since observations were first made with the barometer in 1692. In England it was ascertained to be 29.58, which is nearly the mean height observed in every quarter of the globe at present, after making allowance for the altitude of the place of observation above the level of the sea. No change in the constituent portions of the atmosphere has been observed.

The blue color of the sky is occasioned by the aqueous vapors which are always mixed with air, and which have the property of reflecting the blue rays more copiously than any other.

Latitude.	Mean Temperature.	Column of Water equal to Column of Vapor in Inches.
0	85	8.315
5	84.6	8.112
10	83.4	7.800
15	81.4	7.326
20	78.7	6.717
25	75.4	6.037
30	71.5	5.315
35	67.2	4.611
40	62.7	3.963
45	58	3.385
50	53.3	2.883
55	48.8	2.468
60	44.5	2.124
65	40.6	1.854
70	37.3	1.647
75	34.6	1.495
80	32.6	1.391
85	31.4	1.332
90	31	1.313

From extensive Meteorological observations, it appears that the moisture of the atmosphere can not assume the tangible form of dew, rain, mist, or clouds, until the general temperature has sunk 6 degrees; for instance, if it is 86 in the day time, and 80 during the night, there will be a plentiful fall of dew or rain. If the same change takes place during the day, it indicates rain. The above table is calculated on this principle for every degree of latitude from the equator to either pole. It appears that if the whole aqueous vapor contained in the air at the equator were condensed and precipitated, it would cover the surface of the earth only to the depth of 8.315 inches; and that the amount diminishes more rapidly than the mean temperature as we advance toward either pole.

BRIEF METEOROLOGICAL FACTS.

The mean height of the barometer, which indicates the mean weight or pressure of the atmosphere, at the level of the sea, is the same in every part of the globe.

As you ascend in the atmosphere, the barometer constantly descends.

The mean temperature of the earth's surface increases gradually from the poles to the equator.

The mean temperature of the atmosphere decreases gradually and regularly as you ascend upward.

The barometer, at the level of the sea, is slightly affected by the annual or diurnal fluctuations of temperature; but in the higher regions of the atmosphere is, on the contrary, greatly affected by them.

The heating and cooling of the atmosphere, by the changes of day and night, take place equally throughout its mass.

The average quantity of vapor in the atmosphere decreases from below upward, and from the equator to the poles.

The western coasts of the extra-tropical climates have a much higher mean temperature than the eastern coasts.

A wind generally sets from the sea to the land during the day, and from the land to the sea during the night, especially in hot climates.

Between the tropics the fluctuations of the barometer do not much exceed one quarter of an inch, while beyond this space they reach to three inches.

In the temperate climates, the rains and the winds are variable.

As we advance toward the polar regions we find the irregularities of the wind increased, and storms and calms repeatedly alternate, without warning or progression.*

In the extra tropical climates, a fall in the barometer almost always precedes a period of rain, and indicates a change or acceleration of the aërial currents.

Barometers situated at great distances from each other, often rise and fall together with great regularity.

More than two currents may often be traced in the atmosphere at one time, by the motions of the clouds, etc.

The force of the winds does not always decrease as the elevation increases, but, on the contrary, is often found to augment rapidly.

The variations of the barometer are less in high situations than in those at the level of the sea.

Northerly winds almost invariably raise the barometer, while southerly winds as constantly depress it.

The mean height of the barometer varies but little with the changes of the seasons.

The apparent permanency and stationary aspect of a cloud is often an optical deception, arising from the solution of moisture on one side, and its precipitation on the other.

The quantity of vapor in the atmosphere in the different seasons of the year (measured on the surface of the earth, and near the level of the sea) follows the progress of the mean temperature.

The pressure of the aqueous atmosphere, separated from that of the aërial, generally exhibits directly opposite changes to the latter.

Great falls of the barometer are generally accompanied by a temperature above the mean for the season, and great rises by one below the same.

The temperature of the earth increases as you dig beneath its surface. The general inference from all the observations made in different parts of the earth, is that there is an increase of heat, amounting to about 1° of Fahrenheit for every 40 feet in depth: that at the depth of 10,000 feet, the heat would be sufficient to boil water; and that at the depth of about 100 miles, or one fortieth part of the distance to the center, the heat would be intense enough to melt most of the earths and stones that are known to enter into the composition of the globe.

The Will o' the Wisp, or ignis-fatuus (the fire of pools) which appears at night on marshy grounds or places of sepulture, and looks like a small flickering light, straggling in an irregular manner at a height of two or three feet from the surface, and sometimes standing for a few moments over a particular spot, is nothing more than spontaneously ignited phosphuretted hydrogen gas, arising from decomposing substances in the ground.

The Meteors, commonly called *falling stars*, which shoot from the upper region of the atmosphere, are ascribed to a similar origin; they are masses of matter inflated with phosphuretted hydrogen gas, which, being spontaneously ignited, shoot in a downward direction to the earth. The greatest height whence they come is not above two or three miles, and seldom as much.

CLOUDS

Have been arranged by Howard into seven classes, and designated as follows:

1. The *Cirrus* or Curl-cloud, resembling a distended lock of hair. It consists of separate fibrous-looking, or hair like stripes of cloud, parallel to each other, and not unfrequently curled, or slightly bent toward one, and more rarely, toward both extremities. In appearance it is the thinnest, the lightest, and the most rarified of all the

denominations of cloud; and in conformity with its appearance, it occupies a more elevated region in the atmosphere than any of the other kinds, floating usually, according to DALTON, from three to five miles above the level of the sea. This species of cloud continually changes its figure. After a continuance of clear weather the *cirrus* first makes its appearance, in the form of a white thread stretched across a portion of the sky. To this line others are successively added laterally, so as ultimately to present the appearance of a number of parallel white threads of cloud. This form is called the linear cirrus. At other times, in addition to the above, lines of the same kind are sent off in oblique or transverse directions, so that the cloud presents the appearance of net work. This species is called the *reticulated cirrus*. The comoid cirrus, vulgarly called the mare's-tail cloud, is, however, the proper cirrus. It has the appearance of a distended lock of white hair, or of a bunch of wool pulled out into fine pointed ends, whence it has derived its name comoid.

The Cirrus is most commonly an accompaniment of a variable state of the atmosphere, and often forbodes wind and rain. In very changeable weather, the direction of the tails of this kind of *cirrus* varies considerably in the course of a few hours. When the tails have a constant direction toward the same point of the compass for any considerable time, it has been frequently observed, that a gale has sprung up from the quarter to which they had pointed.

2. The *Cumulus*, or *stacken-cloud*, or *cloud of day*, as it is sometimes called, is characterized by a flattened base, and a heaped or cumulated superstructure. It floats at a much lower level than the *cirrus*, varying perhaps from 3,000 feet to two miles above the level of the sea. In its appearance it is the most picturesque of all the denominations of cloud, and when opposed to the sun, reflects from its piled up sides a brilliant white color as pure as that of snow.

The best time for viewing the progressive formation of the *cumulus* is in fine settled weather. If we then observe the sky about the time of sunrise, or soon afterward, we shall see small specks of cloud here and there in the atmosphere. These often appear to be the result of small gatherings, or concentrated points of the *stratus* or evening mist, which, rising in the morning, grow into small masses of cloud, while the surrounding atmosphere becomes clearer. As the sun rises these clouds get larger—two or three which are near each other coalesce—and at length a large cloud is formed, which, assuming a cumulated and irregularly hemispherical shape, has received the name of *cumulus* or stacken-cloud. This may properly be denominated the cloud of day, as it usually subsides in the evening in a manner which proves the exact counterpart to its formation in the morning. It breaks up into small fragments and evaporates, and is succeeded again by the *stratus* or *fall-cloud*, which has been called the cloud of night by some writers, on account of the period in which it prevails.

There are some varieties in the forms of the *cumulus* which deserve particular notice, as they seem to be connected with electrical phenomena. In some kinds of fine weather, when these clouds form soon after sunrise, increase through the day, and subside in the evening, they are of a more hemispherical form than when they occur in changeable weather. When these well-formed cumuli prevail during many days together, the weather is settled, and the atmospherical electronometer has been observed not to vary much in its indications. These *cumuli* are whitish colored, and reflect a fine strong silvery light when opposed to the sun. The *cumuli* which are seen in the intervals of showers are more variable in form; they are more fleecy, and have irregular protuberances. Sometimes they are of a blackish color, like the clouds which the sailors call *scud*, and at other times they seem of a tuberculated form. *Cumuli* may at any time increase so as to obscure the sky.

3. The *Stratus* or *Fall-cloud*, or *Cloud of Night*, as it is sometimes called from the time it makes its appearance, are the meteorological names given to fogs and mists, which, in extensive sheets, chiefly during the night, cover the earth's surface, and disappear usually in the morning with the advancing temperature of day. Sometimes, particularly in calm weather, and during the coldest period of the year, when, owing to the obliquity of the sun's rays, his influence is not sufficiently strong to dissipate them, this species of cloud rests upon the earth's surface, perhaps for a week or a fortnight, without intermission.

The best opportunity for observing the formation of the *stratus*, is on a fine still evening, after a hot day in the end of summer or beginning of autumn, at which time this species of cloud is very prevalent. We shall then observe that as the *cumuli*, which have prevailed through the day, decrease, a white mist forms by degrees close to the ground, or extends only for a short distance above it. This cloud arrives at its density about midnight, or between that time and morning, and it generally disappears after sunrise. The *stratus* has often been found positively electrified, and its component particles do not wet leaves or other substances connected with the earth below it, and probably the air above it contained a negative countercharge. The *stratus* should be distinguished from that variety of the *cirro-stratus* or wane-cloud which looks much like it in external appearances, and which has usually a similar state of electricity with the earth. The criterion whereby we may judge to which of the two modifications to refer a mist, is, that the *stratus* does *not* wet objects it alights on, but the *cirro-stratus* moistens every thing.

4. The *Cirro-cumulus*, or sonder-cloud, consists of small, roundish, well-defined masses of clouds separated or sometimes only nearly separated from each other, and closely arranged in extensive horizontal beds. This cloud has more resemblance to the *cumulus* than to the *cirrus*. In fact it seems to consist of small, imperfectly or flatly formed *cumuli* arranged in horizontal beds. This cloud is subject to some varieties in the size and figure of its orbicular masses, and in their nearer or more distant approximation to each other. Its most striking feature is observable before or about the

time of thunder-storms in summer. The component *nubeculæ* are then very dense in their structure, very round in their form, and in closer apposition than usual. This kind of *sonder-cloud* is so commonly a forerunner of storms that it has frequently been spoken of by poets as a tempestuous prognostic. In rainy and variable weather a variety of this cloud appears, strikingly contrasted with the above-mentioned kind; being of a light fleecy texture, and its *nubeculæ* having no very regular form. Under these circumstances it is sometimes so light and flimsy in its texture as to approach very nearly to the nature of the *cirro-stratus.* Sometimes this kind of *cirro-cumulus* consists of *nubeculæ* so small as scarcely to be discernible; the sky seems speckled with innumerable little round white and almost translucid spots. The *cirro-cumulus* of fair summer weather is of a middle nature, neither being so dense as the stormy variety, nor so light as the one last described. Its *nubeculæ* vary in size and in the degree of their proximity. In certain kinds of fine dry weather, with light gales of north and easterly winds, small detachments of *cirro-cumulus* rapidly form and subside again which do not lie in one plane, but in general these clouds are in horizontal arrangement. The formation of *cirro-cumulus* is either spontaneous, that is, unpreceded by any other cloud; or, 2d, it may result from the changes of some other modification. Thus the *cirrus* or *cirro-stratus* often changes into *cirro-cumulus*, and *vice versa.* When this cloud prevails in summer, we may in general anticipate an increase of temperature; and in winter it often precedes the breaking up of a frost, and indicates warm and wet weather. In warm weather, during summer, several extensive beds of this cloud, ranged in different altitudes, and viewed by moonlight, have a very beautiful and picturesque appearance, and have been compared by poets to a flock of sheep at rest. The *cirro-cumulus* either subsides slowly, as if by evaporation, or it changes into some other modification of cloud.

5. The *Cirro-stratus* or *wane cloud.* The form of this cloud, which is least apt to be confounded with that of other denominations, is often seen on fine summer evenings, when it presents the appearance of a bed or layer of cloud of considerable length, but neither broad nor deep, and seemingly stationary at a great altitude above the earth's surface. All the varieties of this cloud are characterized by shallowness, or great horizontal extent, in proportion to their vertical depth; so that when the *cirrus*, or any other cloud, is observed to assume this form, we may generally expect that it will end in a *cirro-stratus.* The *cirrus*, for example, having existed some time in the higher regions of the atmosphere, often descends lower; its fibers become more regularly horizontal; and it puts on by degrees the character of the wane-cloud. The *cirrus* more frequently changes to the *cirro-stratus* than the *cirro-cumulus* does, and the *cirro-cumulus* more frequently than the *cumulus.*

The *cirro-stratus* being once formed sometimes reassumes the character of the modification from which it originated, but more frequently it evaporates by degrees, or, by inosculating with some other modification, produces the *twain-cloud* and eventually falls in rain.

The *cirro-stratus* seldom remains long in the same form, but is observed to be constantly subsiding by degrees; hence it has been called the *wane* cloud from the old English verb to *wane* or waste away. There are many varieties in the figure of the *cirro-stratus*, some of which are more transitory than others. Sometimes this cloud is disposed in wavy bars or streaks in close horizontal opposition, and these bars vary almost infinitely in size and shape. A flat, and nearly horizontal, cloud, composed of such streaks is very common, particularly in variable weather in summer. The bars which compose this variety are generally compressed in the middle, and are more distinct toward the edges. A variety not unlike this is seen on fine summer evenings, and constitutes what has been denominated the mackerel-backed sky. It is often very high in the atmosphere. We have observed that, on ascending lofty mountains, the apparent distance of this cloud seems scarcely diminished, while the *cumulus*- or *stacken-cloud* has been sailing along on a level with the point of observation or even below it. Another common variety of *cirro-stratus* differs from the last in being one plane and long streak, thickest in the middle, and wasting away at its edges. This, when viewed in the horizon, seems to alight on the tops of the *cumulo stratus*, and in these cases the density of the large twain cloud increases in proportion as these long wane clouds form and evaporate on their summits; a circumstance which looks as if the great density of the cloud depended on the inosculation and subsequent intermixture of the two different modifications with each other. The result of this intermixture, and the consequent density of the cloudy mass, is eventually the formation of the *nimbus* and the fall of rain. Another principal variety of the *cirro-stratus* is one which consists of small rows of little clouds, curved in a peculiar manner. It is called the *cymoid cirro-stratus*, and it is a sure indication of stormy weather. The last variety of *cirro-stratus* to be mentioned, is that large and shallow vail of cloud, which extensively overspreads the sky, particularly in the evening and during the night, and through which the sun and moon but faintly appear. It is in this cloud that those peculiar refractions of the sun and moon's light called halos, mock-suns, etc., usually appear, and which is the surest prognostic we are acquainted with of an impending fall of rain or snow. To these principal varieties of the *cirro-stratus* others less frequent might be added; but as their forms are almost innumerable, every meteorologist must observe them for himself. The usual termination of the *cirro-stratus* is, by forming an intimate union with some other cloud to produce rain. In general, therefore, the prevalence of the wane cloud is always a sign of a fall of rain or snow. At other times this cloud evaporates or changes into some other modification, as previously observed.

6. The *Cumulo-stratus*, or *twain-cloud*, is a compound of the *cumulus* and the *cirro-stratus*; the *cirro-stratus* being either intermingled with the *cumulus* or widely extending its base, so that

while the base is flat and united like the *cirro-stratus*, the superstructure resembles large *cumuli*, rising from the base in the forms of detached mountains and rocks. The *cumulo-stratus* may be always regarded as a stage toward the production of rain, and it forms in the following manner: The *cumulus* which in form passes along in the current of the wind, seems retarded in its progress, increases in density, spreads out laterally, and at length overhangs the base in dark and irregular protuberances. The change to the *cumulo-stratus* often takes place at once in all the *cumuli* which are near to each other; and their bases uniting, while the superstructures remain asunder, rising up with mountain-like or rocky summits, the whole phenomena has a fanciful appearance. The change from *cumulus* to *cumulo-stratus* is often preceded by *cirro-stratus*, or some other of the lighter modifications, coming over in an upper current, and alighting on the summit of the *cumulus*. Long lines of wane cloud often appear for a length of time attached transversely to the summits of the twain-cloud, and give them the appearance of being transfixed by shafts. *Cumuli* sometimes meet together, and begin to be arranged along with joined bases without acquiring the dense black color of the *cumulo-stratus*, and as the change is gradual, we may view the cloud in an intermediate state. Twain-clouds vary somewhat in appearance. Those in which hard hail-showers and thunder-storms form, look extremely black before the change to rain, and have a most picturesque but menacing aspect, as they are seen slowly coming up with the wind. The *cumulo-stratus* sometimes evaporates or changes again to *cumulus*, and sometimes it forms itself spontaneously, without the precurrence of any other cloud, and disappears again. But in general, it ends at last in the *nimbus* and falls in rain. Frequently in a long range of these clouds, one part changes into *nimbus*, and rains, while the other remains a *cumulo-stratus*. Having given this sketch of the modifications, it must be observed, that masses of clouds sometimes appear hardly referable to any of them, but even then, if watched long enough, they will be found to put on sufficient of the character of some of the modifications to be registered under its name.

7. The *Cumulo-cirro-stratus*, or *nimbus*, or rain-cloud, is that cloud or aggregation of clouds from which rain is falling. It usually presents the appearance of a horizontal layer of aqueous vapor, over which clouds of the *cirro-stratus* kind are spread; while other clouds of the *cumulus* form enter it laterally and from beneath.

Any of the six above-described modifications may increase so as to obscure the sky, without ending in rain, before which the peculiar characteristic of the rain-cloud may always be distinguished. The best manner of getting a clear idea of the formation of the *nimbus*, is by observing a distant shower, in profile, from its first formation to its fall in rain. We may then observe the *cumulus* first arrested, as it were, in its progress, then a *cirrus* or *cirro-stratus* may appear to alight on the top of it. The change to *cumulo-stratus* then goes on rapidly, and this cloud, increasing in density, assumes that black and threatening appearance which is a known indication of rain. Shortly afterward the very intense blackness is changed for a more gray obscurity, and this is the criterion of the actual formation of water, which now begins to fall, while a *cirriform* crown of fibers extends from the upper parts of the clouds, and small *cumuli* enter into the under parts. After the shower has spent itself, the different modifications appear again in their several stations; the *cirrus*, *cirro-stratus*, or perhaps the *cirro-cumulus*, appears in the higher regions of the air, while the remaining part of the broken *nimbus* assumes the form of a flocky *cumulus*, and sails along in the current of wind which is next the earth. When large *cumulo-strati* begin to appear again, they indicate a return of the rain; and these processes are constantly going on in showery weather, when rapid formation and destruction of rain-clouds goes on and is attended by the other modifications in succession, in the manner above described. In continued rainy days, we can not observe the upper parts of the *nimbus*, which extends for miles over large tracts of country; but we have no doubt that the same processes go on slower and on a larger scale in continued rainy weather, which are more conspicuous in the rapid and partial formation of showers.

DEW.

From Dr. Wells's observations, it appears that a thermometer laid upon grass during calm clear nights, exhibits an atmospheric temperature lower by some ten degrees than one suspended in the air some four feet above the grass. It was further found that the atmospheric temperature continues gradually to rise according to a diminishing ratio, in ascending perpendicularly above four feet, so that at the altitude of 220 feet, the atmosphere, on favorable nights, exhibited a thermometric temperature as much as ten degrees higher than it did at four feet above the ground.

This coldness on the earth's surface is the cause of the deposition of dew. The moist particles floating in the atmosphere become condensed, and bathe all the surrounding objects in moisture. On certain nights seemingly favorable, from the calmness of the air and the clearness of the sky, to the deposition of dew, neither dew nor mist may make their appearance. This, which is of frequent occurrence in inland dry countries, is owing to an unusual dryness or unsaturated condition of the atmosphere, so that there is nothing to condense.

FOGS.

Are produced by a general sinking of the atmospheric temperament, and occur most frequently when the temperature is rapidly declining upon the approach or during the depth of winter. Their formation may commence at any altitude above the earth's surface where the atmosphere, upon the reduction of its temperature, becomes first oversaturated, upon which condition their existence depends. Damp low-lying countries, where the air is frequently loaded with moisture, and where the sinking of temperature in the fall of the year is considerable, are most subject to fogs.

There is a species of fog which may be seen floating over the surface of canals and deep pools in a calm morning after a clear frosty night, upon the first introduction of cold weather in the fall of the year. It arises from the surface of water being warmer than the incumbent atmosphere. The temperature of the moisture evaporated in such cases from the warm watery surface below, sinks upon intermixing with the colder atmosphere immediately above; and so soon as the air thus supplied with humidity becomes oversaturated, this species of fog begins to show itself. The fog or haze which makes its appearance over the sea, when its surface is warmer than the incumbent atmosphere, is identical with the above.

Fogs on the coast of North America, and particularly along the course of the Gulf Stream, are produced by cold winds blowing from northern latitudes and resting on the comparatively warm surface of the Atlantic Ocean. Along the track by which the Gulf Stream conveys an immense body of water from the equatorial toward the polar regions, fogs are of the commonest occurrence. The thermometer proves that the Gulf Stream is several degrees warmer than other parts of the Atlantic equally distant from the equator.

Fog sometimes makes its appearance at sea in opposite circumstances to those last mentioned, viz.: when the atmosphere is warmer than the surface of the sea. This may occur when the wind subsides after blowing with force for a day or two over a sea surface, from a warm toward a colder latitude, and more particularly after blowing during summer from a southerly, heated, and damp land surface toward the ocean, and a colder latitude. If in either of these cases the superior coldness of the surrounding surface of the ocean be communicated to the incumbent atmosphere in sufficient intensity to produce over-saturation, fog begins to appear.

Another way in which a limited portion of the surface of the ocean is frequently rendered much colder than the incumbent atmosphere, is when large icebergs, frozen in some bay or inlet, are carried out to sea, and transported by winds, tides, and currents to a warmer climate. The same thing also happens when great quantities of ice, frozen in some large river, such as the St. Lawrence, are carried by its current to the ocean upon the breaking up of the frost. In places and seasons of the year where icebergs are to be apprehended, such as near the coast of Newfoundland during the latter half of spring or beginning of summer, this species of fog, accompanied by a sudden and otherwise inexplicable coldness, gives warning to the mariner during the night of his being in the vicinity of icebergs. In such cases vessels generally lie-to, and await the return of daylight. This kind of fog, like the preceding, begins to present itself whenever the coldness of the surrounding ocean is communicated to the atmosphere in sufficient intensity to produce over-saturation.

SNOW.

The formation of snow is too obvious to need any particular explanation. It is simply congealed rain, frozen particles, precipitated from the clouds, and preserved by the coldness of the atmosphere in a frozen state until they reach the earth. The process can be exemplified on a small scale by the admission of a current of the external air, much below the freezing point, into a heated apartment loaded with aqueous vapor. Dr. Robertson states, that in a crowded assembly room, at St. Petersburg, a stream of cold air was accidentally admitted into the room by a gentleman breaking a pane of glass, on which the vapor in the air was immediately congealed, and fell in the form of snow-flakes.

SLEET.

Is caused by the frozen flakes of snow falling through a warmer atmosphere than that in which they were formed. The snow, by the time it reaches the surface of the earth, is partly melted, and has received the name of sleet.

RAIN.

Provided other things be equally favorable, the annual amount of rain that falls, and the heaviness of the showers, are greatest at the equator, and diminish as we recede toward either pole. The reason of this is obvious, when it is considered that the aqueous capacity of the atmosphere, and evaporation, the process by which it is supplied with humidity, increase with warmth of climate; and accordingly, that an equal reduction of temperature, or an equal intermixture of different portions of saturated air of different temperatures, will produce a greater precipitation of humidity from the atmosphere in a warm than in a cold climate; but although the annual amount of rain be greater, the number of rainy days, that is, days on which rain falls without reference to its quantity, is greatest in cold climates. This seems to be owing to the greater uncertainty in the direction and force of the winds as we recede further from the torrid zone. Indeed, in all climates lying within the 30th parallel of latitude, rainy weather is for the most part restricted to particular seasons of the year; so that there are usually annual periods of four, five, six, or eight successive months, during which little or no rain falls. And even in all inland countries beyond the 30th parallel of latitude, rainy weather is more or less restricted to particular seasons of the year; and this seems to be owing to the prevalent direction of the winds during such periods being unfavorable to the production of rain.

In general, the nearer the sea, the more elevated the situation, and, if not on a hill, the nearer its vicinity, and the more prevalent the direction of the wind is from the sea, especially if, while coming from the sea, it blows from a southerly direction in the northern hemisphere, and from a northerly direction in the southern hemisphere, the greater is the annual amount of rain for the latitude. On the contrary, the further distant from the sea, and the flatter and more low-lying the country, and particularly if mountains intervene (and the higher the better) between the place of observation and the sea, and these be distant from the place of observation at least twenty miles, the less rain ought to fall for the latitude.

The localities where the greatest amount of rain falls for the latitude, is probably on mountains near the sea of the height of 2,000 feet and upward in warm climates; and 1,500 feet and upward in temperate latitudes. The quantity of rain which falls on mountainous spots is inferred from the fact that mountains give birth to almost all the large rivers in the world, and are frequently enveloped in clouds while the surrounding atmosphere is clear and cloudless. It is not unusual for rain to descend in torrents on the mountains even in the dry season, while not a drop can be detected in the valley beneath.

If mountains varying in height from 1,200 to 3,000 feet, lie immediately to the leeward of any place, or even suppose a place to be entirely surrounded by such, instead of affording protection from rain, they greatly increase its amount. The excess of rain in the vicinity of mountains, is owing to the influence of their rugged summits and irregular intersecting valleys, in producing a generally agitated state of the atmosphere, and a conflict of aërial currents moving in somewhat different directions. The mechanical effect of such circumstances is to drive them together, and congregate the component vesicles of clouds into drops of rain, and thereby accelerate their descent to the earth.

As the aggregate amount of heat which the earth annually receives from the sun, and the amount of moisture annually evaporated from the earth's surface, probably undergo little or no variation, the aggregate amount of rain which falls on the earth's surface, must in like manner be similar every year. Hence it may be inferred that wetter seasons than usual in one climate or country are balanced by drier ones elsewhere. Such differences are wholly to be ascribed to variations in the direction and force of the winds in different seasons.

It is recorded upon authentic evidence that rain sometimes of a yellow or red color has been observed to fall in various places. In these cases, the coloring matter appears to have been derived from vegetable pollen, transported by winds, and rained on the earth. Snow of a red color has also been observed in Iceland. The coloring matter in this case was imputed to a mixture of red ashes, ejected during a volcanic eruption in the neighborhood. It is also said to be recorded upon authentic evidence, that during a strong gale of wind, herrings and other fish were carried from the Frith of Forth as far as Loch Leven. It is likewise on record that a shower of rats once fell in Norway; and also that a shower of toads fell near Edinburg.

SIGNS OF RAIN.

When the moon is of a pure silvery color, good weather is indicated; but when it has a brown or chestnut-colored tint rain may be expected. When stars are surrounded by colored halos, the approach of rain is indicated.

When mountain ranges or distant objects appear nearer to us than usual; when sounds are heard more clearly from a distance; when the odor of plants is more than usually powerful, rain may be prognosticated.

The low flight of swallows indicates approaching rain. The reason is that they pursue flies, which are driven nearer to the earth in consequence of the moist atmosphere above.

Ducks, geese, and other water-fowl may be seen to throw water with their bills over their backs, and dive frequently before a heavy shower. They do so to prepare their coats, which might otherwise get ruffled in a sharp shower.

Before the fall of rain cattle may sometimes be observed stretching out their necks, and snuffing in the air. The increased odor from flowers is supposed to be the cause.

Persons of delicate temperament and of ill health experience pain of the head, tooth-ache, irritability of temper, pains in old sores which have been healed, the aching of corns, and excessive nervousness on the approach of rain.

Dogs closely confined in a room become drowsy and stupid before rain; the same in a less degree is observed of cats; horses neigh much; cattle low; the fallow deer become restless, and many other animals from the uneasiness they experience at the change of the atmosphere, prognosticate rain.

Insects being very sensible of every change, are very good weather guides; hence fine weather may be predicted when many spiders' webs are seen in the open air; also when bees are found traveling far away from their hives. On the contrary, therefore, when spiders remain hidden, and bees are not seen away from their homes, rain may be expected.

Many flowers are excellent indicators. The trefoil, the convolvulus, and other plants, contract their leaves before a shower, or during dull cloudy weather.

HAIL

Appears to be descending moisture, curiously frozen into hard lumps. It has puzzled meteorologists to find out how it is that it gets frozen in descending to a lower altitude, instead of melting and coming in the shape of rain. A cold current of air blowing suddenly in the direction of a rain cloud, is understood to be the immediate cause of most hail-showers. The large size of hail-stones is attributed to an accumulation during the progress of their descent. It is probable that the largest commences its nucleus with a small nucleus which receives continued accessions from vapory particles in the neighborhood. Accordingly hail-stones are found to be smaller on the tops of mountains than in the neighboring plains and valleys, because, not falling so far, they do not augment their size by the addition of successive layers of congealed watery vapor.

Hail is chiefly restricted to the temperate latitudes, and in these is most frequent during spring and summer. Within the tropics it seldom falls at a lower altitude than from 1,500 to 2,000 feet above the level of the sea. The explanation usually given of this fact is, that the temperature, which increases downward to the surface of the earth, is constantly so high in those regions, that hail never descends to a lower altitude than that above-mentioned, without being melted.

The squall of wind, or whirlwind, which accompanies and ushers in the hail-storm, is no doubt produced by the depression of temperature which the hail communicates to the lower atmosphere in its descent to the ground.

HOAR-FROST,

Which is seen in autumn silvering the trees and fences, is merely frozen dew. The conversion of dew into hoar-frost is a wise provision of nature, by which plants, etc., are protected from the severity of a freezing cold atmosphere.

FALLING MIST

Is an aqueous deposition which commonly occurs in still weather, and most frequently during the winter season, when the temperature is either below, or a little above freezing point. In the former case it has the same appearance as hoar-frost; in the latter it resembles dew. Most frequently it results from the same cause as dew, viz., from the reduction of temperature on the earth's surface. Frequently this cause is assisted by a gradual sinking of the temperature generally. In some countries, such as in a portion of Peru, almost the whole moisture which the soil receives to support vegetation, is supplied from falling mist and dew. The amount of moisture thus supplied is sometimes very considerable. "In that part of Peru," says Dr. Thompson, "called Valles, it never rains at all. But, during winter, the earth is covered with so thick a fog as to intercept the rays of the sun. The fog appears almost every day during winter, with a density that obscures objects at any distance. About 10 or 11 o'clock it begins to rise, but without being totally dispersed; though it is then no impediment to the sight, intercepting only the direct rays of the sun by day, and that of the stars by night. Sometimes it is so far dispersed that the disc of the sun becomes visible, but the heat from his rays is still precluded. In winter these vapors dissolve into a very small mist or dew, which they call *garua*, and thus everywhere moistens the earth. These *garuas* never fall in quantities sufficient to damage the road, or incommode the traveler, but they render the most arid and barren parts fertile. They convert the disagreeable dust in the streets of Lima into mud.

VARIATIONS IN THE TEMPERATURE OF WATER.

Changes in the temperature of the ocean, and also of deep lakes, are restricted in a great measure to the surface. Below the depth of fifteen or twenty fathoms, the annual variations of temperature are not perceptible. In fresh water, where the temperature at the surface is above 39°, the temperature sinks as the depth becomes greater, until it nearly reaches a point where it becomes stationary. On the contrary, when the temperature of the surface is below 39°, the temperature increases with the depth, till it reaches that point, and at all farther depths remains stationary. Saussure found the temperature of the Lake of Geneva at the depth of 1,000 feet to be 42°, and could discover no monthly variations under 160 feet. These observations afford an explanation why the surface of deep lakes, even in moderately high latitudes, never freezes. Owing to the maximum density of the water being at 39°, gradually as the particles on the surface get cooled below that point, they sink to the bottom. Consequently, before the surface can be frozen, or even before its temperature can be reduced below 39°, the temperature of the whole water to the bottom must be lowered to that point. The duration of cold weather, except in very high latitudes, is usually too short to produce this effect where the depth of water is considerable.

The great coldness experienced at the bottom of deep caverns, is explained on the same principle as the coldness near the bottom of deep lakes. During the depth of winter, the cold air at the top of the cavern, from its superior specific gravity, sinks down to the bottom. But, in summer, the warm air at the mouth of the cavern, owing to its inferior specific gravity, has no tendency to sink down, and displace the cold air below.

THE MEAN TEMPERATURE OF AMERICA COMPARED WITH THAT OF EUROPE.

In North America, the mean annual temperature is lower, and the severity of winter greater, than in corresponding latitudes of Europe. Playfair says, "At Prince of Wales's Fort, Hudson Bay, lat. 59°, long. 92° west, the mean temperature is 20° under the standard; at Nain, in Labrador, 16°; at Cambridge, in New England, 10°. Mercury has been supposed to be frozen by the natural cold as far south as Quebec, lat. 47°.

The low mean annual temperature in North America, compared with that of Europe in corresponding latitudes, may be ascribed partly to the surface of the land being more generally covered with forests; but it is principally owing to the want of draining, by which a large proportion of the rain that falls is again evaporated, and of course a smaller proportion is returned to the sea by rivers. Forests tend to increase the cold by preventing the sun's rays from striking the ground. Evaporation produces cold; and marshes and lakes are therefore favorable to the severity of the weather.

"Connected with the influence of evaporation upon the mean temperature," says Mr. Hutchison, "it may be remarked, that a more extended system of what is called tile-draining, and all other means by which a larger proportion of rain-water is returned to the sea by rivers, instead of being evaporated from the soil, will tend to raise the mean annual temperature of those countries, and those districts of countries where it is generally introduced. Hence it is probable that lands which are at present cold, bleak, barren, and seemingly unfit for cultivation will, by proper draining, be ultimately rendered comparatively warm, dry, and productive."

THE TRADE-WIND

Is the most regular of all winds, and blows in the same, or nearly the same direction, throughout the year. This wind, with some few exceptions, extends to about the 30th parallel of latitude on both sides the equator around the globe. Its direction is from east to west, inclining to the north of east on the north side of the equator, and to the south of east on the south side of the equator. The variations in its declination from due east toward the north or south, seem to be somewhat determined by the parallel over which the sun is vertical. Thus as the sun advances from the equator toward the northern tropic, the trade-wind on the south of the equator gradually blows more from the south of east; and on the contrary, when the sun advances from the equator toward the southern tropic, the trade-wind on the north of the equator blows more from the north of east. In short, the trade-wind blows from the east, and its deviations from this direction are toward the parallel of latitude where the sun is at the time vertical. The larger the expanse of ocean over which the trade-wind blows, the greater its steadiness; accordingly they are more steady in the Pacific than in the Atlantic, and in the South than in the North Atlantic Ocean. Within the region of the constant trade-winds rain seldom falls, but it descends abundantly in the adjoining latitudes. Contrary to what might have been anticipated, the atmosphere is peculiarly cool and refreshing.

SEA AND LAND BREEZES.

In all maritime or insular situations in warm climates, where the sun is nearly vertical, and accordingly where it exerts a strong heating influence, the surface of the land becomes warmer during the day and colder during the night than that of the ocean. The consequence is, that the atmosphere over the land, from participating in its excess of warmth during the day, is expanded upward and gives rise to a current in the upper portions of the atmosphere from the land toward the sea, and this in its turn gives rise to a current at the surface of the earth from the sea toward the land. During the night, however, when the surface of the land becomes colder than that of the adjoining sea, the atmospheric columns immediately incumbent upon the land, by participating in its coldness, become more depressed than those over the adjoining sea. Hence the upper portions of the latter float over upon the former. And in consequence of the additional weight thereby communicated to the atmosphere over the land, a current close to the earth's surface from the land toward the sea is produced.

When the sea-breeze first sets in it commences near the shore, and gradually extends itself further out at sea, and as the day advances becomes more or less hot. Hence the sails of ships have been observed quite becalmed six or eight miles out at sea, while at the same time a fresh sea-breeze has been blowing upon the shore. The cause of this is obvious: the mass of air nearest the land is the first to rush in and supply the place of that which has been rarified by the heat of the sun.

THE CHARACTERISTIC QUALITIES OF WINDS.

1. HOT and DRY WINDS are such as blow from an extent of heated land parched up by long-continued drought. Such winds are exceedingly unwholesome. They dry the palate; exhaust the body; produce languor, loss of appetite, restlessness, and dejection of spirits, and dispose the frame to suffer from fevers and bilious disorders. Their deleterious influence is best guarded against by keeping within doors as far as convenient, by sprinkling the floors frequently with water, and by living upon an abstemious, cooling, and moistening diet during their continuance.

2. COLD and DRY WINDS are such as blow during cold weather from a cold toward a warmer climate, over a great extent of land. Their piercing and refrigerating influence is partly owing to their thermometric coldness, and partly to their dryness promoting evaporation, and thereby carrying off heat more rapidly from the human body and all other moist surfaces.

Winds remarkable for coldness and dryness are prolific of inflammatory diseases, such as sore throats, tooth-aches, pleurisies, and coughs and colds, and are very injurious to asthmatic patients.

3. HOT and MOIST WINDS are such as during the warmest season of the year are accompanied with wet weather; or such as are experienced in sultry weather on the sea-coast, when the wind blows from the sea, and a warmer latitude. In all intertropical climates the condition of the atmosphere is uniformly hot and moist during the rainy season. In such climates this is also the sickly season, and that in which fevers prevail, especially those incidental to a marshy, swampy locality. It does not appear, however, that this class of febrile diseases is produced by the immediate influence of heat and moisture, for they never occur at sea, unless infection has been previously imbibed on shore. Those diseases seem rather to be owing to unknown volatile substances which emanate from the soil, or from its vegetable productions, when subjected to great heat and moisture.

4. COLD and MOIST WINDS are such as prevail during wet weather in high latitudes, or during rainy weather in temperate latitudes.

An atmosphere of this kind disposes the human frame to suffer from dropsy, scrofula, and other diseases that arise from relaxation and want of elasticity in the muscular fiber. Warming clothing, nourishing diet, and active exercise are in such circumstances the best guardians of health,

PROGNOSTICATIONS OF THE WEATHER

BY THE APPEARANCES OF CLOUDS.

1. When clouds are observed to break up into fragments, and gradually to dissolve by evaporation, it indicates that the region of the atmosphere in which they float is undersaturated with moisture, and prognosticates dry weather. On the contrary, when clouds are observed to form, or, when previously formed, are observed to increase in bulk and density; and also when small detached clouds unite together and form larger clouds, it indicates that the causes immediately instrumental in the formation of clouds are in operation, and prognosticates that wet weather will soon follow.

2. When the whole sky is covered with clouds, their further formation and increase in bulk and density, is indicated by their descent to a lower level, and their decrease, by their ascent. Accordingly, when clouds begin to set down on the tops of hills (except when this is the result of reduction of temperature upon the approach of night) it prognosticates rain; and when they begin to rise above the hills, it prognosticates dry weather.

3. Mist extending upward from the surface of the earth on a summer morning, foretells a dry, warm day.

4. During frosty weather, the dissolution of mist, and the appearance of small detached roundish clouds of the *cirro-cumulus* kind in elevated regions of the atmosphere, and partly or wholly obscuring the sky, foretell that the termination of the frost is at hand.

FROM THE COLOR OF THE SKY, AND THE APPEARANCE OF THE HEAVENLY BODIES.

The darker the color of the sky, when viewed perpendicularly upward, the more it indicates dry weather; and on the contrary, the paler it is, the more favorable to wet weather.

When the color of the sun and moon appears pale and dull, it indicates wet weather; and on the contrary, when it is bright and clear, it indicates dry weather.

When the horns of the moon are sharp, or when the margin of the moon is generally well defined, it indicates dry weather; and on the contrary, when the horns of the moon are blunt, and its margin somewhat ill-defined, it foretells wet weather.

When the moon is surrounded by an iris it indicates rain. The reason of this is, that the iris is produced by the moon's light being reflected by aqueous vapor contained in the atmosphere.

Supposing no moon visible, if the stars look larger and somewhat paler, less vivid, and at the same time less numerous than usual, it indicates an unusual amount of moisture in the atmosphere, and accordingly foretells rain. On the contrary, when the stars look smaller, more twinkling, and at the same time more numerous than usual, it indicates an unusual smallness in the amount of aqueous vapor in the atmosphere, and accordingly foretells dry weather.

FROM THE DIRECTION AND FORCE OF THE WIND.

If the wind, during the winter season, be blowing with considerable, or, at times, with great violence from the south-west, especially if it has been shortly previous, for a considerable length of time out of the east, or north-east, it may be predicted, if wet weather has not already commenced, that it will very soon begin, and that it will last one, two, or three days, or perhaps longer.

If the wind during the same season of the year blow from any point between north and east inclusive, and with very little velocity, it may be predicted that the weather will continue dry and frosty, or inclined to frost, for one, and with diminishing probability of being correct, for two, three, or more days thereafter.

In general the greater the velocity of the wind, and more especially if it be out of a warm direction, the greater is the probability of rain. And, on the contrary, the less the velocity of the wind, be its direction what it may, but especially if it be out of a cold direction, the less the probability of rain.

When the wind is out of a cold and dry direction, and very little of it, and all the other means of prognostication indicate a continuance of dry weather, a change of wind to a warm and wet direction, and an increase in its velocity, very soon reverses the prognostications to the indication of wet weather.

In all anticipations of the character of the weather, it is advisable to draw our conclusions from every variety of prognostication. Thus not only the present and immediately previous condition of the barometer should be taken into account, but also the direction and force of the wind, and the appearances of the clouds and sky.

FROM THE MOON'S AGE.

It has been very generally supposed that at the changes of the moon, or at some fixed period of the moon's age, the weather becomes liable to change. This belief has no solid foundation in meteorological truth. No good reason has yet been discovered why the moon should have any influence in producing these changes. Though the changes of the moon happen at the same time all over the earth, it is well known that changes of weather are by no means simultaneous in places not very far distant from each other; indeed, it often happens, that while it is wet in one place, it is dry and beautiful in another, although both may be similarly situated as regards sea, and other natural boundaries. Predictions founded on the changes of the moon are now admittedly trivial, and based on no sufficient reason. Comparisons have been made by experienced meteorologists between the changes of the moon and the changes of the weather, but without discovering any connection between them. It is well, therefore, to utterly distrust all predictions founded on these changes. These remarks do not of course apply to the prognostications based on the atmospheric appearance of the luminary. They are based on easily demonstrated natural laws, and will be found correct.

PROGNOSTICATIONS OF THE RAINBOW.

When a rain-cloud interposes itself between the sun and the spectator, what is called a rainbow is produced. It consists of two bows or arches of light, stretching across the sky, and decomposed into their elementary characters by refraction. The internal, or principal rainbow, which is often seen without the other, has the violet rays innermost, and the red rays outermost. The external, or fainter rainbow, has the violet color outermost, and the red innermost.

The prognostication of the rainbow extends no further than giving intimation that rain is falling from the cloud where the rainbow is visible. If the direction of the wind be such as to cause the cloud to pass over the place where the spectator is situated, rain may there be expected soon to fall. But if the direction of the wind be such as to cause the cloud to pass without becoming vertical to the spectator, no rain in the situation where he is need be expected.

PROGNOSTICATIONS OF A COLD AND ALSO OF A MILD WINTER.

The principal prognostication of a cold winter is unusual coldness during the preceding summer; and this is always with greatest accuracy ascertained by the unusual lateness of the harvest. A cold summer is on all occasions a cloudy and wet one. The reason why a cold, cloudy, and wet summer foretells that a cold winter will probably follow is, that an unusually large proportion of the solar heat, which ought to be imbibed by the earth during summer, is partly intercepted by clouds before reaching the earth, and partly carried off from its surface by evaporation. During winter the temperature of the atmosphere is principally supported by the giving out of solar heat absorbed by the earth during the previous summer.

Another prognostication of a cold winter, and which, if accompanied with the preceding, increases its effect, is much rain in the fall of the year (in August, September, and October), followed by an unusual prevalence of northerly and easterly winds during October and November. These dry winds, by increasing evaporation from a thoroughly moistened soil, prematurely carry off a larger proportion than usual of that heat, which by its slow return from the earth's surface, ought to mitigate the atmospheric coldness during the depth of winter.

A mild winter may be prognosticated by the occurrence of the opposite circumstances to those previously stated which foretell a cold winter. The first of these is a warm, dry summer, which can always be best ascertained by the unusually early period at which harvest in such years commences. The other prognostication is a small, or only a moderate amount of rain in the fall of the year, attended and followed by an unusual prevalence of south and southwest winds, of very little or only moderate velocity.

MY PLACES OF OBSERVATION, AND SOME GENERAL REMARKS IN RELATION THERETO.

I have two places of observation on Brooklyn Heights, Long Island, N. Y.—one is at my dwelling-house, about 700 feet from tide-water; the other at my office, on the brow of the Heights, about 300 feet from the same tide-water.

Long Island extends in a line nearly S. W. to N. E., is about 140 miles long, and from 8 to 20 miles wide, and is shaped like a terrestrial needle. The broad Atlantic washes one side, and the East river and Long Island Sound the other. Its western shore is washed by the East river, the Bay of New York, and the Narrows. It has no mountains, and but few hills.

To the South, the nearest land is the West India Islands; to the South-east, the Cape de Verdes, off the western coast of Africa; to the East, the Azore Islands; to the North, a narrow strait, the East river, divides it from the continent (if it can be called a continent since the discovery of the N. W. passage); to the West, New York Bay, and beyond it the continent stretches to the Pacific Ocean. There are no mountains within fifty miles, and those at that distance are not of great altitude.

The thermometrical, and some of the other meteorological observations, are made at the dwelling-house hourly, by four observers—my wife, our daughter Georgiana, and myself, and an assistant in summer makes and records the 4 A. M. observations, and in winter the 5 A. M. observations, at which times he takes the slip on which the temperatures and some other observations are recorded hourly for the preceding 24 hours, and transcribes the whole in a journal, at the same time computing the *equilibriations*, and writing opposite thereto what these indicate. The night observations and records, after bed-time, are made by myself, and the blanks which are seen in the tabulated statements, result from my absence from home.

The thermometers used are ten in number—but the records are made but from four: two *north* and two *south*, and those in the tabulated statemen's which follow are but from one thermometer, and that with a northern exposure, and connected by metallic wires with the earth and with the high atmosphere, and with the atmosphere also by metallic tubes—no casing is on or around them, nothing but the metal scale and the glass ball and tube. The thermometer from which this record is made is in the open air, the rain and snow falling on it, and exposed to the wind, but sheltered from the sun. Glass and metal *insulators* containing dense saline fluids, that hold a very large per centage of *deliquescing chlorids* in solution, shield the instruments from any influence which the surface of the building might otherwise exercise upon them. The thermometers are ten feet from the surface of the ground. The outer thermometer in the range on which the rain and snow falls, rises and falls quickly when the rain or the snow strikes it. Observers who record thermometrical observations should be experienced and competent, and very systematic, and be able at once when seeing a great rise or fall, or frequent fluctuations in the temperature indicated by the thermometers, to note every particular connected with these at the very time, and these records should be reviewed and re-examined within the same 24 hours.

Observations made at 7 A. M. at the period of the winter solstice may be regarded as affording a good means of determining an approximation to the coldest hour in the 24, but observations made at that hour at the period of the summer solstice afford no means of determining the coldest hour in the morning at that period of the year, and the like variation as the days shorten or lengthen from solstice to solstice. The tabulated statement which follows shows but 75 days in the entire year in which the lowest temperature in the 24 hours occurred at 7 o'clock in the morning, viz.: In Dec., on 12 days, Jan. 12, Feb. 14, March 11, April 2, May 2, June none, July none, Aug. none, Sept. 1, Oct. 6, Nov. 15 days. The same remark will apply to any one single hour of the day to determine the highest temperature, but in a very much lesser degree. For example, on the 29th of June, the highest temperature during the day occurred at 9 A. M., and was 96°. The coldest temperatures occur when there is but little or no wind, and the same remark will apply to the maximum temperatures.

My house, where the thermometrical observations are made, fronts a street running east and west, open west to the Bay, and between two streets running north and south, and is surrounded by a belt of unobstructed atmosphere 60 feet south, 25 feet each, east and west, and 150 feet or more north.

The observations on the direction of the wind, snow, rain, condition of the sky, and appearance of lightning, are made at the office where the atmospheric view is wholly unobstructed, it being an isolated building and on high ground overlooking the great Bay of New York to the Narrows.

My rain-guages are of my own planning, and are square tubes, one having an inch surface, and the other four inches—are 14 inches deep connecting with metallic pipes terminating in glass bottles which secures all the water falling within the tube from evaporation by wind or heat. The upper edge of the guages are ground to a sharp edge.

The altitude of our places of observation is, on the surface of the ground, about 70 feet above tide. Lat. 40° 41′ 50″ N., Long. 73° 50′ 30″ W.

These papers are not so full, nor in as much detail, as I desired, but are as ample as opportunities of leisure afford me the means of preparing, and if they shall be found useful and of interest to the public and help to repay the publishers of this little volume the expenses they have incurred in this work, I shall feel that I have been abundantly compensated for my labor.

BROOKLYN HEIGHTS, Dec. 1, 1856. E. MERIAM.

Days of Month.	DECEMBER, 1855.					JANUARY, 1856.				
	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.
1	2 & 3 P.M.	44°	6 & 7 A.M.	28°	16°	2 & 3 P.M.	30°	5–8 A.M.	19°	11°
2	1 ..	46	7 ..	33	13	11 & 12 ..	30	4 & 5 ..	19	11
3	11 A.M.–2 ..	44	12 P.M.	33	11	1 ..	36	11 & 12 P.M.	29	7
4	12 M.–3 ..	42	6 & 7 A.M.	30	12	1 A.M.	26	12 ..	13	13
5	12 M.–3 ..	44	6 & 7 ..	32	12	3–6 P.M.	22	4 A.M.	9	13
6	2 & 3 ..	46	4 ..	30	16	2–4 ..	24	12 P.M.	15	9
7	2 ..	46	12 P.M.	31	15	11 & 12 ..	23	5–7 A.M.	12	11
8	1–3 ..	40	7 A.M.	26	14	11 & 12 M.	26	12 P.M.	1	25
9	5 ..	54	1 & 2 ..	34	20	1–7 P.M.	2	6 & 7 A.M.	–5	7
10	1 & 2 A.M.	41	11 & 12 P.M.	29	12	2, 3 & 12 P.M.	14	4–6 ..	–3	17
11	12 M.–4 P.M.	30	12 ..	25	5	2 ..	28	1 ..	14	14
12	2 ..	31	5–7 A.M.	23	8	12 ..	28	6 ..	15	13
13	11 A.M.	33	5 ..	25	8	6 & 7 A.M.	38	11 & 12 P.M.	29	9
14	2 & 12 P.M.	31	6 & 7 ..	22	9	1 P.M.	32	9–12 ..	24	8
15	2 ..	41	1 & 2 ..	32	9	12 M.	30	6 & 7 A.M.	20	10
16	4 ..	52	1–3 ..	38	14	2 & 3 P.M.	29	6 & 7 ..	18	11
17	2 ..	47	12 P.M.	37	10	1 ..	34	1–7 ..	25	9
18	11 A.M.	38	12 ..	29	9	11 A.M.–4 ..	34	11 & 12 P.M.	27	7
19	12 M.–3 P.M.	32	4 A.M.	25	7	1 ..	38	12 ..	14	24
20	4 ..	32	7 ..	22	10	12 M.–2 ..	18	5–8 A.M.	10	8
21	2 ..	40	5 ..	22	18	2 & 3 ..	22	6 ..	13	9
22	9–11 ..	50	4 & 5 ..	35	15	3 & 4 ..	25	1–7 ..	14	11
23	1–4 A.M. & 12 M.–3 ..	48	12 P.M.	42	6	2 ..	32	1–8 A.M. & 11 & 12 P.M.	22	10
24	5 & 6 A.M.	44	10–12 ..	31	13	2 & 3 ..	27	6 & 7 A.M.	17	10
25	11 A.M., 6 & 7 P.M.	36	1, 2, 6 & 7 A.M.	31	5	1 & 2 A.M.	23	10–12 P.M.	9	14
26	1–6 A.M.	34	12 P.M.	17	17	2–4 P.M.	26	1–5 A.M.	8	18
27	12 M., 1, 3 & 4 P.M.	22	6 & 7 A.M.	12	10	12 M.	24	1–8 ..	18	6
28	12 M.–2 ..	30	1–4 ..	20	10	2–4 P.M.	28	1–4 ..	22	6
29	12 ..	25	6–8 A.M. & 5–7 P.M.	16	9	1 ..	36	2–5 ..	24	12
30	1 & 2 ..	28	12 ..	18	10	12 M. & 1 ..	30	12 P.M.	16	14
31	3 ..	26	5–8 A.M.	16	10	12 M. & 2 ..	24	6 & 7 A.M.	13	11

	FEBRUARY, 1856.					MARCH, 1856.				
Days of Month.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.
1	12 M.	32°	2–5 A.M.	18°	14°	12 M.	40°	6–10 P.M.	26°	14°
2	1 A.M.	26	12 P.M.	11	15	3 P.M.	40	11 & 12 ..	27	13
3	3 P.M.	13	6–8 A.M.	4	9	3 ..	34	11 & 12 ..	22	12
4	3 ..	15	4–7 ..	4	11	4 ..	42	5–7 A.M.	18	24
5	2 & 3 ..	18	7 ..	8	10	11 A.M.	32	6 ..	20	12
6	1–4 P.M. & 9–12 ..	18	7 ..	7	11	2 P.M.	44	12 P.M.	22	22
7	1–4 & 6 ..	31	2 & 3 ..	17	14	8, 11 & 12 ..	27	6 & 7 A.M.	15	12
8	2 ..	33	10 P.M.	24	9	12 M. & 1 ..	40	12 P.M.	14	26
9	12 M.	29	12 ..	16	13	12 M.–4 ..	18	5–8 A.M.	8	10
10	2 P.M.	29	7 A.M.	12	17	3 ..	16	6 & 7 ..	4	12
11	1 ..	41	2–7 ..	23	18	2 & 3 ..	32	6 ..	11	21
12	11 A.M.	40	11 & 12 P.M.	7	33	3 & 4 ..	30	6 ..	18	12
13	1 & 2 P.M.	14	7 & 8 A.M.	3	11	2 & 3 ..	34	4–7 ..	20	14
14	3, 4 & 10 ..	14	5–7 ..	2	12	4 ..	39	6 & 7 ..	22	17
15	12 ..	29	5–7 ..	14	15	2 & 3 ..	42	4–6 A.M. & 12 P.M.	29	13
16	3 ..	38	8 ..	24	14	1 ..	40	5 & 6 A.M.	25	15
17	6 A.M.	24	8 P.M.	11	13	2–5 ..	39	3 & 4 ..	23	16
18	10 & 11 ..	20	9–11 ..	10	10	3 & 4 ..	43	6 ..	24	19
19	3 & 4 P.M.	26	5 & 6 A.M.	13	13	10 & 11 A.M.	33	5–7 A.M. & 5–10 P.M.	30	3
20	1–4 ..	34	4–7 A.M.	22	12	12 M. & 1 P.M.	43	4, 6 & 7 A.M.	26	17
21	11 A.M.–3 ..	38	7 ..	26	12	3 ..	44	5 & 6 ..	30	14
22	1–4 ..	40	5–7 ..	25	15	11 A.M.–5 ..	40	5 & 6 A.M. & 12 P.M.	32	8
23	1–3 ..	40	5 ..	29	11	4 ..	46	5–7 A.M.	30	16
24	3 ..	34	11 P.M.	26	8	11 A.M.	47	6 & 9–12 P.M.	32	15
25	2 ..	38	6 A.M.	24	14	3 P.M.	43	4–7 A.M.	30	13
26	3 ..	34	5–7 ..	22	12	1–3 ..	42	5 & 6 ..	29	13
27	1 ..	34	5 & 6 ..	23	11	10 & 11 A.M. & 1 ..	40	10–12 P.M.	28	12
28	2–5 ..	34	6 & 7 ..	23	11	11 A.M.	32	5 & 6 A.M. & 7 ..	22	10
29	3 ..	38	5 ..	25	13	3 & 4 P.M.	38	5 & 6 A.M.	24	14
30	—	—	—	—	—	3 ..	36	5 & 6 ..	21	15
31	—	—	—	—	—	3 ..	35	4 & 5 ..	20	15

Days of Month.	APRIL, 1856.					MAY, 1856.				
	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest,	Highest.	Hours on which the Temperature was Lowest,	Lowest.	Change.
1	3 P.M.	42°	5 & 6 A.M.	21°	21°	1 & 2 P.M.	60°	8–11 P.M.	39°	11°
2	10 A.M.–2 ..	46	5 & 6 ..	26	20	3 & 4 ..	47	5 A.M.	39	8
3	1 & 3 ..	58	9 & 12 P.M.	41	17	9 A.M. & 4 ..	46	5 ..	40	6
4	1 & 2 ..	56	1 A.M.	41	15	4 & 5 ..	59	5 ..	43	16
5	12 M.–2 ..	50	5 & 6 ..	34	16	2 ..	58	5 ..	38	20
6	1 & 2 ..	54	5 & 6 ..	34	20	2 ..	63	5 ..	39	24
7	1 & 2 ..	58	5 & 6 ..	33	25	10 A.M.	60	11 P.M.	43	17
8	2 ..	62	5 ..	38	24	1, 2 & 7–11 P.M.	43	5 & 6 A.M.	41	2
9	10–12 M.	64	6 ..	41	23	10 A.M. & 1 & 2 ..	47	5–7 ..	42	5
10	3 & 4 P.M.	56	11 P.M.	40	16	11 A.M. & 2 ..	50	5 ..	41	9
11	12 M.	55	5 & 6 A.M.	33	22	3 & 4 ..	72	4–7 ..	46	26
12	2–5 P.M.	70	5 & 6 ..	42	28	12 M.–2 ..	81	5 & 6 ..	51	30
13	3 & 4 ..	50	12 P.M.	35	15	10 A.M.	68	11 P.M.	45	23
14	2 ..	59	5 A.M.	31	28	4 P.M.	63	4 A.M.	45	18
15	11 A.M.	55	12 P.M.	40	15	11 A.M.	72	5 ..	45	27
16	11 A.M.–2 P.M.	54	12 ..	39	15	9 ..	73	5 ..	53	20
17	11 A.M.	54	5 A.M.	40	14	11 & 12 M.	74	5 ..	55	19
18	2 P.M.	65	5 ..	42	23	4 P.M.	73	5 ..	50	23
19	10–12 M.	66	5 ..	42	24	1 ..	71	4 ..	52	19
20	9 A.M.	49	6–10 P.M.	38	11	3 ..	81	5 ..	53	28
21	6–12 M.	42	11 ..	39	3	3 ..	72	5 ..	50	22
22	12 M. & 1 P.M.	50	5–7 A.M.	39	11	3 ..	76	5 ..	48	28
23	11 A.M.	61	5 ..	38	23	2 & 3 ..	84	5 ..	52	32
24	3 & 4 P.M.	66	5 & 6 ..	46	20	3 ..	91	4 ..	60	31
25	3 ..	69	12 P.M.	45	24	1 ..	69	12 P.M.	45	24
26	1 & 2 ..	63	11 ..	43	20	1–4 ..	64	4 & 5 A.M.	43	21
27	12 M.	65	7 A.M.	46	19	11 A.M.	73	4 ..	46	27
28	1 P.M.	76	5 ..	48	28	1 P.M.	77	4 & 5 ..	56	21
29	12 M. & 1 ..	70	5 & 6 ..	49	21	11 A.M.	73	11 P.M.	50	23
30	11 A.M.–1 ..	62	11 & 12 P.M.	43	19	10&11 A.M. &1&2 P.M.	60	5 A.M. & 11 ..	41	19
31	—	—	—	—	—	4 ..	63	4 & 5 A.M.	38	25

	JUNE, 1856.					JULY, 1856.				
Days of Month.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.
1	3 P.M.	77°	4 A.M.	48°	29°	3 P.M.	86°	6 1-2 A.M.	64°	22°
2	3 ..	88	4 & 5 ..	54	34	9 & 10 A.M.	82	4 ..	60	22
3	2 ..	94	4 ..	62	32	12 M.	86	4 ..	66	20
4	1 & 2 ..	88	4 ..	62	26	12 ..	83	11 P.M.	64	19
5	9 A.M.	77	11 & 12 P.M.	54	23	9 A.M.-4 P.M.	80	4 & 5 A.M.	58	22
6	12 M.	57	4 A.M.	51	6	11 A.M.-2 ..	88	4 & 5 ..	62	26
7	2 & 3 P.M.	76	4 ..	51	25	9 & 11 A.M.	78	4 ..	63	15
8	1 ..	69	10 P.M.	54	15	1 P.M.	82	4 ..	64	18
9	3 ..	79	4 A.M.	54	25	2 ..	73	5 ..	61	12
10	12 M.-3 ..	82	4 ..	56	26	3 ..	76	4 ..	60	16
11	1 ..	86	4 ..	60	26	11 A.M.-2 ..	80	4 ..	62	18
12	12 M.	80	4&5A.M.&10-12 P.M.	60	20	2-4 ..	88	4 ..	64	24
13	4 P.M.	80	1-6 A.M.	60	20	1 ..	90	12 P.M.	72	18
14	2 ..	84	4 ..	59	25	11 A.M.-2 ..	90	5 A.M.	71	19
15	1 ..	82	12 P.M.	57	25	1 ..	94	4 ..	72	22
16	2 & 3 ..	80	4 A.M.	53	27	1-3 ..	92	4 ..	68	24
17	2 ..	84	4 ..	54	30	3 ..	98	4 ..	69	29
18	6 ..	65	4A.M.,1 & 10-12 P.M.	60	5	2 ..	99	4 ..	73	26
19	12 M. & 2-4 ..	78	4 & 5 A.M.	60	18	8 A.M. & 2 ..	84	11 P.M.	66	18
20	2-4 ..	90	4 ..	59	31	3 ..	86	4 & 5 A.M.	60	26
21	3 & 4 ..	96	4 ..	66	30	1 & 3 ..	86	4 ..	60	26
22	3 & 4 ..	98	4 & 5 ..	72	26	2 & 3 ..	88	5 ..	65	23
23	7 A.M. & 2 & 3 ..	78	12 P.M.	61	17	2 & 3 ..	90	4 & 5 ..	64	26
24	12 M.	80	4 A.M.	58	22	3 ..	96	4 & 5 ..	68	28
25	10 A.M.	78	4 & 5 ..	62	16	1-4 ..	96	4 & 5 ..	70	26
26	12 M.-4 P.M.	88	4 ..	66	22	3 ..	99	4 & 5 ..	70	29
27	9 A.M. & 3 ..	88	11 P.M.	68	20	1 ..	100	4 & 5 ..	72	28
28	1-7 ..	86	4 & 5 A.M.	61	25	3 ..	98	4 & 5 ..	73	25
29	2 & 3 ..	98	4 ..	72	26	2 ..	85	10 & 11 P.M.	73	12
30	9 A.M.	96	4 ..	76	20	3 ..	96	5 A.M.	72	24
31	——	—	——	—	—	12 M. & 1 ..	85	5 1-2 ..	68	17

Days of Month.	AUGUST, 1856.					SEPTEMBER, 1856.				
	Hours on which the Temperature was Highest,	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.
1	2 & 3 P.M.	89°	4 A.M. & 11 P.M.	71°	18°	2 P.M.	71°	10 P.M.	57°	14°
2	1 ..	87	4 A.M.	70	17	2–4 ..	71	6 A.M.	52	19
3	11 A.M.	85	10 & 11 P.M.	70	15	3 ..	77	5 ..	53	24
4	2 P.M.	88	4 & 5 A.M.	68	20	2 ..	80	5 .	55	25
5	6 A.M.	71	11 P.M.	63	8	2 & 3 ..	81	5 ..	56	25
6	1, 3 & 4 P.M.	79	5 A.M.	63	16	1 ..	80	5 ..	59	21
7	3 ..	88	1–5 ..	67	21	12 M.	84	4–6 ..	66	18
8	1 ..	85	9 P.M.	67	18	3 P.M.	76	8 ..	65	11
9	3 ..	83	2–5 A.M.	65	18	2 & 3 ..	82	4–6 ..	60	22
10	1 & 3 ..	84	4 & 5 ..	63	21	3 ..	84	5 ..	60	24
11	1 & 3 ..	88	5 ..	66	22	1 & 2 ..	88	4 ..	68	20
12	1 ..	88	10 P.M.	69	19	1 ..	76	4–6 ..	60	16
13	1 ..	83	5 A.M.	64	19	4 ..	79	5 ..	58	21
14	2 & 3 ..	83	4 P.M.	64	19	3 ..	75	4–6 ..	58	17
15	2 ..	83	5 A.M.	60	23	1 ..	76	4 & 5 ..	56	20
16	1 ..	82	5 ..	60	22	2 & 3 ..	74	11 P.M.	57	17
17	1, 3 & 4 ..	78	4 & 5 ..	60	18	3 ..	79	5 A.M.	52	27
18	9 & 10 A.M. & 2 ..	78	3 & 4 ..	60	18	1 & 3 ..	85	6 ..	64	21
19	11 A.M.	75	1–4 ..	62	13	2 ..	78	10 P.M.	62	16
20	11 A.M. & 2 P.M.	80	1–6 ..	66	14	2 ..	74	4 & 6–9 A.M.	60	14
21	11 A.M., 1 & 2 ..	71	6 ..	60	11	3 & 4 ..	74	6 & 7 ..	58	16
22	2 ..	76	5 ..	57	19	2 ..	66	11 & 12 P.M.	53	13
23	1, 2 & 4 ..	82	5 ..	59	23	11 A.M.	68	5 & 6 A.M.	50	18
24	4 ..	82	4 & 5 ..	66	16	12 M.	66	5 ..	47	19
25	9 & 11 A.M. & 12 M.	76	10 P.M.	56	20	2 P.M.	65	5 & 6 ..	44	21
26	2 P.M.	69	4 & 5 A.M.	48	21	1 ..	71	4–6 ..	50	21
27	12 M.–3 ..	74	5 ..	52	22	2 ..	73	5 & 6 ..	54	19
28	11 & 12 M.	76	4 & 5 ..	58	18	12 M. & 2 & 3 ..	71	6 ..	52	19
29	12 ..	78	1–5 A.M. & 10 P.M.	66	12	10 A.M. & 1 & 2 ..	70	6 ..	56	14
30	2–4 P.M.	74	6 A.M.	56	18	1 ..	72	11 P.M.	57	15
31	12 M.–2 ..	76	4 & 5 ..	53	23	—	—	—	—	—

Days of Month.	OCTOBER, 1856.					NOVEMBER, 1856.				
	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.	Hours on which the Temperature was Highest.	Highest.	Hours on which the Temperature was Lowest.	Lowest.	Change.
1	1 P.M.	62°	12 P.M.	43°	19°	2 & 3 P.M.	54°	6 & 7 A.M.	32°	22°
2	3 ..	64	4–7 A.M.	40	24	1–4 ..	62	6 ..	44	18
3	1 & 3 ..	68	5 ..	49	19	11 ..	61	5–7 ..	46	15
4	11 A.M.–3 ..	64	5 & 6 ..	45	19	11 A.M. & 12 M.	68	12 P.M.	52	16
5	1 ..	72	4–6 ..	50	22	2 P.M.	48	12 ..	30	18
6	12 M.	76	5 ..	58	18	2 ..	41	6 A.M.	27	14
7	2 P.M.	66	11 P.M.	51	15	3 ..	55	6 & 7 ..	34	21
8	3 ..	66	5 & 6 A.M.	47	19	11 A.M.–2 ..	62	12 P.M.	42	20
9	2 & 3 ..	70	5 & 6 ..	49	21	1 ..	44	12 ..	33	11
10	2 & 3 ..	72	5 & 6 ..	50	22	1–3 ..	40	5–7 A.M.	30	10
11	2 & 3 ..	76	5 & 6 ..	54	22	2 & 3 ..	42	6 & 7 ..	26	16
12	1 ..	70	5 & 6 ..	54	16	3 ..	50	5–7 ..	30	20
13	3 ..	70	5 & 6 ..	54	16	1 ..	49	6 ..	34	15
14	1 & 3 ..	46	11 & 12 P.M.	39	7	11 A.M. & 12 M.	50	1, 6 & 7 ..	39	11
15	2 & 3 ..	46	11 ..	34	12	12 ..	42	9–12 P.M.	32	10
16	2 & 3 ..	54	5 & 6 A.M.	34	20	2 & 3 P.M.	51	4–6 A.M.	30	21
17	10 & 11 A.M.	58	1–6 ..	42	16	1 ..	43	11 & 12 P.M.	32	11
18	11 A.M., 1–3 P.M.	58	6 & 7 ..	48	10	1 & 2 ..	42	2–4 A.M.	31	11
19	2 ..	62	5 & 6 ..	46	16	1 & 2 ..	44	6 & 7 ..	31	13
20	4 ..	65	6 ..	45	20	2 ..	40	6 & 7 ..	28	12
21	2 & 3 ..	66	5 & 6 ..	44	22	1 ..	48	4–7 ..	28	20
22	3 ..	71	6 ..	48	23	10 A.M.	56	10–12 P.M.	42	14
23	10 A.M. & 12 M.	64	12 P.M.	38	26	1 P.M.	48	5–7 A.M.	36	12
24	3 P.M.	45	6 A.M.	32	13	2 & 3 ..	56	5–7 ..	44	12
25	3 ..	50	5–7 ..	32	18	1 & 2 ..	48	5–7 ..	40	8
26	3 ..	58	1–7 ..	43	15	1 ..	56	12 P.M.	40	16
27	11 ..	57	6 ..	43	14	12 M. & 2 ..	45	12 ..	34	11
28	12 M.–3 ..	54	12 P.M.	43	11	2 ..	45	5–7 A.M.	32	13
29	3 ..	54	6 & 7 A.M.	40	14	1 ..	36	8, 10 & 12 P.M.	30	6
30	3 ..	64	6 & 7 ..	40	24	1–3 ..	40	1–8 A.M.	30	10
31	12 M.	45	11 P.M.	35	10	—	—	—	—	—

EQUILIBRIUMS OF TEMPERATURE.

When the temperature remains unchanged for a term of seven or more consecutive hours, we denominate *in equilibria*. This state of rest in the atmosphere is found, by carefully-recorded observations, to result from the shock of an earthquake at a remote point.

EQUILIBRIATIONS OF TEMPERATURE.

When the temperature fluctuates for a term of seven or more consecutive hours, and the fluctuations do not exceed two degrees, we term that state of the atmosphere an *equilibriation* of temperature, and find, by long-continued observations, to have resulted from successive shocks of earthquakes at distant points.

COLD TERMS.

It is a remark often made by observing people, that the cold lasts three days. The conclusion is well founded. A quarter of a circle of 360 hours is 90—which is an evening, three full days, and a morning. In these cases the cold commences in the evening, it continues three full days, and ends the morning succeeding the three days.

In the winter of 1847-48, a question arose as to the comparative coldness of that winter, compared with that of the preceding winter. In order to determine this fact, I counted the hours on my record-book, during which the temperature remained at and below the freezing-point of Fahrenheit, and found seven terms of 90 and one of 45 consecutive hours. In a communication I addressed to the Board of Regents of the University of the State of New York, and which was published in their report to the legislature, *Senate Document, No.* 71, *of* 1848, p. 275, I said: *The inquiry now arises, to what particular causes are the cycles owing? Why should they be near a quarter of a circle of* 360? In the winter of 1848-49 the cold answered the second query, for, on the 31st of December, 1848, the temperature fell to and below the freezing-point, and did not rise above it till the 13th of January, 1849—counting the hours on the record, they were found to be 315, which is seven-eighths of 360, or three and a half times 90; the next cold term commenced on the 5th of February, and continued to the 11th—its duration was 135 consecutive hours, or one and a half times, or three eighths of 360; the third cold term commenced on the 12th and ended on the 23d of February,—its duration was 270 hours, or three times 90, or six-eighths of 360.

The causes of the cold terms are found in the record of earthquakes. All great and sudden changes are produced by the earth upon its own atmosphere.

Heated Terms.—The state of the atmosphere which I denominate a heated term, is that in which for several consecutive days the maximum temperature rises from 80° to and above 90°.

ÆROLITES, THUNDER-BALLS, AND AURORAL SHOWERS.

1855, November 30th.—A ball of fire seen from London, England, in the evening; it darted along in a straight line over about a third of the sphere; it then burst like a rocket, but without noise, falling in a shower of sparks, which instantly disappeared.

Meteor at Porto Rico in December, day not given.

1856, January 7th.—A large ærolite, seen from Highfield House Observatory, England, and several other parts of England, and from the Isle of Wight. It was in sight from 4h. 47m. P. M. till 6h. 8m. P. M., and presented a most beautiful appearance.

27th.—A fine meteor seen from Highfield House Observatory, England, at 12h. 3m. A. M.

February 3d.—Large ærolite seen from Highfield House Observatory, England, and other places, at 7h. 55m. P. M. It spread into a mass of orange-colored fire, in an oval form, the size of five or six full moons long, and two broad. In a short time it changed instantly to a brilliant green, then again to a brilliant red; but throughout it was tinted around the edges, and the head did not change its color. It exploded without noise.

16th.—A splendid meteor, seen from Lincolnshire, England, at 8h. 45m. P. M. It was of a bluish white, and fell without leaving a train.

April 5th.—An ærolite of great brilliancy seen from Harpenden, Herts, England, at 8h. 30m. P. M. It exploded in a few seconds, with a hissing sound.

11th.—A large ærolite was heard to explode at 9 A. M., from Belfast, Rockland, and neighboring towns in Maine; it shook the buildings.

11th.—A splendid ærolite, seen from the Liverpool Observatory, England, at 8h. 30m. P. M. It was of excessive brilliancy. The colors were alternately intensely blue, green, brilliant red, occasionally yellow. At about 8h. 50m. an apparent explosion took place, when two bodies became observable. At about 9 it was not discernible from the mist. During the half hour it had moved about 3° in space, and had no appearance either of ascending or descending.

A brilliant meteor passed over Vera Cruz, Mexico, day not given.

July 8.—An ærolite seen from Memphis and other parts of Tennessee. and several places in Mississippi, about 6 P. M.

15th.—Meteoric explosion heard in the air over Leicester Center, Mass., between 11 and 12 A. M.

17th.—A brilliant ærolite seen from Charleston, S. C., at 7 P. M. It seemed to assume different shapes and colors as it passed off.

August 3d.—An ærolite seen to explode in Iowa, while the sun was shining brightly.

Several large meteors were seen from Highfield House Observatory, England, during the week ending the 5th.

15th.—A remarkable ærolite seen from several places on Lake Superior, and also from Minnesota, just after sunset.

27th.—A superb meteor seen from New York at 9 P. M. The upper part of the nucleus was of a brilliant red, the lower of a pale and whitish color.

September 5th.—Meteor seen from Brooklyn Heights at 8h. 30m. P. M.

11th.—A most brilliant meteor seen from different parts of California in the evening, emitting long and beautiful streams of light. It was visible for about half a minute. Its disappearance was accompanied with a loud noise like thunder.

Ærolites have, by some, been supposed to come from volcanoes in the moon. They have no such origin, but are the product of our own planet.

Meteors differ from ærolites; but in published accounts met with in newspapers, no distinction is made between ærolites and meteors. Meteors, such as fall in the meteoric showers, result from aurora borealis, and the latter from volcanic discharges from the earth's interior. Such meteors fall frequently in the months of August and November, and less frequently in other months of the year, have been found when examined after reaching the earth, to be of a gelatinous substance, like dissolved starch or the white of an egg; while ærolites, which have been found in great numbers after reaching the earth, and have been found by persons who saw them fall, and who were thus enabled to secure the ærolite before the heat had passed from it, are of metallic and silicious composition. Ærolites, no doubt, result from the discharge of lightning through a portion of the atmosphere holding mineral and earthy matter in suspension, or from volcanic discharges accompanied by lightning.

E. MERIAM, Brooklyn Heights.

THUNDER AND LIGHTNING.

The frequency of thunder-storms is illustrated by the following tabulated statement of lightning, recorded in our register for twelve months, viz., October 1st, 1855, to September 30th, 1856.

1855, Oct.—	On Brooklyn Heights,	2 days.	Elsewhere within the field of our research.	7 days,
Nov.	"	—	"	5 "
Dec.	"	1 day,	"	5 "
1856, Jan.	"	—	"	4 "
Feb.	"	—	"	3 "
March.	"	2 days,	"	8 "
April.	"	5 "	"	12 "
May.	"	5 "	"	20 "
June.	"	20 "	"	25 "
July.	"	14 "	"	25 "
Aug.	"	10 "	"	16 "
Sept.	"	6 "	"	11 "
Total,		65 days,		143 days.

This synopsis, in some cases, embraces thunder-storms occurring at our place of observation and elsewhere on the same day.

At Valparaiso, on the western coast of South America, thunder and lightning is rarely witnessed; but on the opposite side of the continent, in the Brazils, Buenos Ayres, etc., thunder-storms are very frequent and severe. The range of the Andes, which attain a great elevation between these two points, appear to affect a separation. In the Arctic zone, beyond the 74th parallel of north latitude, we have met with no record of thunder and lightning; and thunder and lightning is less frequent at Melbourne, Australia—although the temperature there sometimes rises to 128° in the shade—than here.

E. M.

ICEBERGS.

The following tabulated statement, made up from our record, exhibits the number of vessels in each month of the year, for a period of sixteen years, which reported meeting with icebergs in crossing the Atlantic.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1841	—	—	—	9	11	1	—	—	—	—	—	—	21
1842	—	—	7	31	11	16	22	16	1	—	—	—	104
1843	—	—	—	—	—	—	—	3	—	—	—	—	3
1844	—	—	—	5	12	3	2	—	—	—	—	—	22
1845	—	—	1	4	10	9	15	5	—	—	—	—	44
1846	—	—	—	1	1	—	2	—	—	—	—	—	4
1847	—	—	7	7	4	3	—	—	—	—	—	—	21
1848	—	—	—	—	—	—	—	—	—	—	—	—	0
1849	—	—	—	1	1	1	2	—	—	—	—	—	5
1850	1	1	12	5	7	5	5	—	1	—	—	1	38
1851	1	7	30	37	64	23	8	1	—	—	—	—	171
1852	—	1	3	6	2	8	1	—	—	—	—	—	21
1853	—	—	—	—	1	—	—	—	—	—	—	3	4
1854	—	4	43	98	74	67	37	9	6	2	—	—	340
1855	—	1	2	5	9	13	5	8	3	5	1	—	47
1856	2	28	24	14	47	41	21	7	2	2	—	—	188

Many persons have supposed that icebergs affected the temperature of the atmosphere at points remote from these frigid navigators. A comparison of the iceberg record of the present year with the record of the temperature of the atmosphere, as seen from observations made on Brooklyn Heights, show that such suppositions are erroneous.

The greater flow of icebergs results from intense cold, producing disruptions of the ice, and not from the comparative mildness of the Arctic atmosphere. This is clearly illustrated by the comparison of our record of Arctic temperatures with the records of the drift of Arctic ice.

E. M.

RAIN.

October, 1855.—Rain fell on 13 days, snow on 1 day. Total amount during the month	7.0[illegible]	inches.
November.—Rain fell on 9 days, snow on 2 days. Total amount during the month	2.10	"
December.—Rain fell on 10 days, snow on 9 days (7 inches). Total amount during the month	5.65	"
January, 1856.—Rain fell on 4 days, snow on 12 days (35 inches). Total amount during the month	3.05	"
February.—Rain fell on 3 days, snow on 7 days (4 inches). Total amount during the month	3.80	"
March.—Rain fell on 4 days, snow on 8 days (12 inches). Total amount during the month	2.05	"
April.—Rain fell on 14 days. Total during the month	1.77	"
May.—Rain fell on 14 days. Total during the month	4.10	"
June.—Rain fell on 14 days. Total during the month	2.70	"
July.—Rain fell on 9 days. Total during the month	2.35	"
August.—Rain fell on 12 days. Total during the month	8.11	"
September.—Rain fell on 8 days. Total during the month	2.92	"
Rain fell on 114 days, snow on 36 days (58 inches). Total during the year	47.68	inches.

The melted snow is included in the rain-table. The fall of rain during the twelve months is about twenty per cent. more than the average annual fall of rain of this locality for a term of years.

E. M.

LIGHTNING

ON THE SEA,

From October 1st, 1855, to September 30th, 1856.

October.—During this month we have accounts of six vessels being struck by lightning: four ships, one sloop, and one vessel not specified; one was sunk, one was set on fire, one damaged in hull and spars, and three damaged in spars, two slightly. No account of any person killed or injured by the lightning. Two of the vessels were at sea, two in dock, one on the lakes, and one at a wharf.

November.—Only one vessel, a ship, during this month. She was at sea, and was damaged in spars and rigging. No persons killed or injured.

December.—Three vessels during this month: two ships and one brig. These were all at sea. One was set on fire and burned up, and the other two were damaged in spars and rigging. Two passengers injured on board of one.

January.—Two vessels during this month were struck: one ship and one schooner. One was at sea, and the other at anchor in a bay. One was damaged in spars and the other reported as having received no damage. No person killed or injured.

February.—Two vessels during this month: one ship and a bark, both at sea. One was damaged in hull and spars to the amount of $10,000. The other was struck twice, injured in spars and hull, and one of her sails set on fire. Four men were knocked down, three were not injured, but one had his clothes all burned off, and himself so badly injured that he was not expected to live.

March.—Seven vessels during this month were struck: five ships, one bark, and a brig. They were all at sea. Two were struck twice, two were damaged in spars and rigging, four slightly damaged, and one did not state what damage received. Two men were killed, eight were injured, one not expected to recover the sight of both eyes. One ship reports "several of the crew injured," and another "several of the crew slightly injured."

April.—Two vessels during this month were struck: a steamship and a brig. One was at sea and the other at anchor. The damage in either case not stated. No person killed or injured.

May.—Five vessels during this month were struck: one ship and four schooners. One was at sea, one on Lake Erie, and the others in harbor at anchor. Four were injured in spars and rigging; no marks of the fluid could be found on the other, but a man was struck down on board, and remained prostrated four days. No person killed or injured.

June.—Fifteen vessels during this month: five ships, one bark, two brigs, six schooners, and one sloop. One was at sea, two on Lake Erie, and the remainder in harbor or at anchor in bays. One was so badly injured in spars, rigging, and hull, that the captain had great difficulty in getting her into a harbor; one was set on fire and damaged otherwise in spars; eleven were damaged in spars and rigging; the damage to one was not stated, and no marks of the fluid could be found on the other, although six of her crew were badly burned and injured. One man was killed, six injured (mentioned above), and four in another vessel so stunned as to be unable to speak for some minutes.

July.—Sixteen vessels during this month were struck: five ships, two barks, one brig, seven schooners, and one pilot-boat. Four were at sea, one on Lake Erie, and the remainder were in harbors or bays. One was very badly damaged in spars, rigging, and hull; one was set on fire; twelve were damaged in spars and rigging, and the damage to two was not stated. One man was killed, one severely injured and burned, so much so as to be senseless twelve hours after the accident, and one account which says "all hands on board were severely injured; they lost the power of speech, and were several hours recovering."

August.—Seventeen vessels during this month were struck: two ships, four barks, ten schooners, and one yacht. Eleven were at sea, and six were in harbor or at anchor. One was damaged in spars, rigging, and hull; two were set on fire, besides being otherwise damaged; eleven were damaged in spars and rigging; two were slightly damaged, and the damage to one was not stated. Two persons were killed, and eleven were injured, one badly. Eight of those vessels were struck on one day, the 8th.

September.—Six vessels during this month were struck: one steamboat, two schooners, one sloop, one smack, and a sail-boat. Three of these were in harbor, and three on their passage. Three were damaged in spars and rigging, one badly damaged, one slightly, and one (the steamboat) received no damage. Two persons were injured, one of them being very badly burned, and one person (the pilot of the steamboat), was rendered senseless for a moment.

In addition to the above, two vessels were struck during the last summer, but the month nor day of the month is not given, neither is the class of the vessels, or the damage sustained.

RECAPITULATION FOR THE YEAR.

Eighty-four vessels were struck by lightning, viz.: twenty-seven ships, one steamship, nine barks, six brigs, one steamboat, thirty schooners, three sloops, a pilot-boat, a smack, a sail-boat, and three vessels not classed.

Of these vessels, one was burned, one sunk, six set on fire, fifty-six damaged, nine slightly damaged, four received no damage, and the damage to seven was not stated. Five persons on board of them were killed, and twenty were injured, two of whom were not expected to recover; besides two accounts which say "several were injured," and one account which says "all hands."

No case of loss of life by lightning has ever been known in a vessel provided with metallic lightning conductors; nor have underwriters ever been called upon (so far as our inquiries have extended) to pay for losses by lightning to vessels or cargoes in any case where the vessel was furnished with conductors, where the continuity was uninterrupted to the water.

Iron ships and steamboats are perfect protection against lightning. No case of loss of life by lightning has been known in an iron ship or steamboat since such vessels have been in use. Ocean steamers having masts require lightning conductors to protect their masts. These facts put forever at rest the idle fear expressed by some, that lightning-rods are dangerous from their supposed attraction for lightning.

The New York marine underwriters deduct 2½ per cent. from the premium of insurance on vessels furnished with conductors.

E. MERIAM, BROOKLYN HEIGHTS.

LIGHTNING

ON THE LAND WITHIN THE FIELD OF OUR RESEARCH,

From October 1, 1855, to September 30th, 1856.

Persons Killed—Seventy-eight, viz.: in dwellings, 17; at or in doorways, 5; under trees, 7; in fields, 6; in the street, 3; on mules, 2; on horseback on a prairie, 2; on horseback in a street, 1; in barns, 2; returning from a field, 2; in a yard, leading a horse to water, drawing water from a well, on levee, on a cab-seat, standing near a coal-pit, crossing a bridge, in a shed, in a tent, in a school-house, standing on the platform of a railroad train on the Baltimore and Ohio Railroad, walking on arail road track—one each—12; and 10, particulars not specified.

Persons Injured—Eighty-seven; besides one account which says several, and another which says a number.

Animals Killed.—53 horses; 13 mules; 38 cattle; and one account that says "some;" 1 sheep, 3 hogs, 2 dogs and 1 cat; and one account that says "horses and cattle."

Fowls and Birds Killed.—A flock of ducks.

Buildings Burned.—2 hotels, 8 dwellings, 54 barns, and one account which says "several;" 8 warehouses, 4 stables, 1 corn-crib, 1 light-house, 1 car-house, and one account which says "a building." A barn in the village of Bergheinfield, Rhenish Bavaria, Europe, was burned by lightning, the fire of which was communicated to other buildings, and 130 houses were consumed.

Buildings Struck.—25 meeting-houses, 142 dwellings, and an account which says "several;" 3 engine-houses, 8 stores, 5 hotels, 4 school-houses, 4 printing offices, 11 barns, and an account which says "a number;" 2 blacksmiths' shops, 2 machine shops, 2 factories, 2 mills, 2 sheds, a court-house, boat-house, hospital, bath-house, stable, shot-tower, gas-house, station-house, shop, coach-house, tool-house, well-house, corn-crib, pickling and preserving dépôt, foundry, carpenter's shop, railroad dépôt—one of each—nine buildings not specified, and two accounts which say "several."

Buildings with Lightning Rods Struck.—9 dwellings, 3 meeting-houses, 1 hotel, 1 seminary, the Smithsonian Institution, 1 printing-office, and a barn. Of these, 1 dwelling was burned, 6 dwellings, 2 churches, and the seminary were damaged.

Telegraph Establishments Struck.—7 offices in which instruments were destroyed or damaged, three accounts in which it was stated the wires were struck, and two places in which the posts were shattered.

Railroads Struck.—Four accounts of railroad tracks being struck, and one account of a railroad train near Baltimore.

Miscellaneous.—3grain stacks, 4 pikes of hay, and 1 tree burned. A stack of hay set on fire; two wagons, a stone tower, a fence, a liberty-pole, a flag-staff, a carriage-pole, and a wall struck and shivered; 35 trees were struck and shivered, besides two accounts which say "several;" in five places the ground was struck, and one account that says, "on the 17th of April, at Corpus Christi, Texas, the ground was torn up in hundreds of places, while in all directions are to be seen the shattered fragments of trees."

Boston, Mass., although frequently visited by thunder-storms, it is rarely the case that lightning strikes in that city; but in the months of May, June, July, and August of the present year, the lightning of six several storms on as many several days, struck in fourteen places in Boston.

Essex, Mass., has been remarkably exempt from lightning-shocks for a series of years; but during the present year every thunder-storm which has passed over the town has left a mark of its visitation, the lightning having struck there in twenty-five several places.

E. MERIAM, BROOKLYN HEIGHTS.

EARTHQUAKES.

The following is a brief statement of earthquakes which have occurred within the field of my research for one year, commencing October 1, 1855, and ending September 30, 1856.

OCTOBER, 1855.

14.—Shock of earthquake at La Ligui, at about 8 P. M.

19.—A shock of earthquake at Neufchatel, Switzerland, during the night.

20.—Shock of earthquake at Neufchatel, Switzerland, at 4 A. M.

21.—A smart shock of earthquake in San Francisco, California, at 7¾ P. M. There was much commotion in the water of the harbor a few minutes preceding the shock, which caused several vessels to heave heavily at their hawsers and cables.

22.—A severe shock of earthquake at Taranaki, New Zealand, by which several buildings were destroyed.

25.—Shocks of earthquake in the canton of Valais, Switzerland. At Veige two sharp shocks in the evening.

27.—Shocks of earthquake at Clear Lake, Downieville, and Goodyear's Bar, California, at 3 P. M. At Viege, Switzerland, a hot wind blew for some time, and the rain began to fall, and it continued to the morning of the 28th.

28.—At Viege, Switzerland, shocks of earthquake commenced in the night after several claps of thunder at intervals.

29.—At Viege, Switzerland, shocks of earthquake continued till 5 A. M. The number was not fewer than thirty-one.

Shocks of earthquake in the Island of Goza, in the Mediterranean, day not given.

NOVEMBER.

2.—Severe shock of earthquake at Zanzibar, at 7h. 50m. P. M.

3.—Shock of earthquake at Villanou, Walker Co., Georgia.

8.—Two shocks of earthquake at Malta.

10.—A series of shocks and mysterious noises at Westfield, Staten Island, New York, supposed to be occasioned by an earthquake.

11.—Four very heavy shocks of earthquake at Belize, Honduras. Severe earthquake at Jeddo, Japan, in the evening. The earthquake opened in the N. E. part of the city, and closed over many thousand houses and inhabitants. 500 Budhist and Sinto temples, and 101,000 dwellings and stores were destroyed, and 30,000 lives lost. The shocks were severe at Simoda.

21.—A rumbling noise and a jarring of the earth felt in the N.W. portion of Philadelphia, at 10 m. before 3 A. M.

27.—Shock of earthquake at Sierra, California, at 8h. 30m. P. M.

28.—A *heavy swell* broke into the harbor of Big River, California, causing some shipwreck. There was not a breath of wind at the time, and the swell came in with terrific violence several times.

DECEMBER.

3.—A mountain exploded in the State of Arkansas, with a rumbling sound and a general vibration of the earth.

4.—A smart shock of earthquake at Barcelona, Spain, at 7 P. M.

5.—Shock of earthquake (two vibrations) at Humboldt Bay, California, at 11h. 20m. A. M.

11.—Shock of earthquake in San Francisco and the Mission Dolores, California, at 4 A. M.

12.—Severe earthquake at Jeddo, Japan, destroying houses and temples, and burying nearly 3,000 people beneath the ruins.

14.—Shock of earthquake at Broussa, Turkey, followed by others for several days.

17.—Two shocks of earthquake at French Mountain, Warren Co., New York, at 2. P. M.

JANUARY, 1856.

2.—Shock of earthquake in San Francisco, California, at 10 A .M.

4.—Slight shock of earthquake at St. Jago de Cuba.

5.—Shock of earthquake at Ogdensburg, New York, at 14 m. past 12 A. M. Sharp shocks of earthquake at Briggs, in the Upper Valais, at Aasan, and at Interlacken, Switzerland, in the afternoon.

7.—Shock of earthquake at Locte, Switzerland, in the night.

9.—Several shocks of earthquake at Winchester, Virginia, at 3 A. M.

12.—Slight shock of earthquake at St. Jago de Cuba.

13.—Slight shock of earthquake at Santa Martha, New Granada.

26.—Two shocks of earthquake at Frederic, Md., at 4 A. M.

FEBRUARY.

5.—A heavy shock of earthquake at Skowhegan, Maine, at 6 P. M., and another during the night.

12.—Slight shock of earthquake at St. Jago de Cuba, at 9h. 15m. P. M.

14.—Slight shock of earthquake at San Francisco, California, about 9 P. M., and several others during the night.

15.—Slight shock of earthquake at San Francisco, California, and a violent shock at 5h. 23m. A. M., which was felt over a great part of the State.

16.—Earthquake at Sonsonate, Salvador.

17.—Earthquake shock experienced in the night, by steamer *Golden Age*, off the island of Mantuoso.

18.—Shock of earthquake in David, in the province of Chiriqui, C. A.

The earthquakes during this month, where the day is not given, are as follows: a slight earthquake in Cuba; shocks of earthquake in Asia Minor, which lasted ten days, and several towns had been destroyed. A new volcano broke out in Equador, C. A., and was accompanied by violent earthquakes, felt over a large portion of the republic. In the city of Cuence two churches were destroyed, a number of private buildings were thrown down, and more than fifty persons perished. The little village of Delog, near where the volcano burst forth, has entirely disappeared, and Paccha has suffered very considerably. This is said to have happened between the 15th and 25th.

MARCH.

2 and 3.—Dreadful earthquake and volcanic eruption on the Island of Great Sangir, in the Moluccas, India.

12.—Shock of earthquake in Madison, Conn., and neighboring towns, at 10 P. M.

16.—Three shocks of earthquake at La Ligni, Chili, at the dawn of day.

21.—Shock of earthquake in Nelson, Amherst, and Albemarle counties, Virginia, about 9 A. M. Earthquake at Mitylene, France.

The shocks of earthquake at Broussa, Turkey, which commenced February 17th, 1855, have continued with intermissions to the present month.

APRIL.

14.—Shock of earthquake at Los Angelos, Cal., and the Monte in the night. Three earthquakes at Papudo, Chili, between March 16 and April 14.

17.—Two shocks of earthquake at Vera Cruz, Mexico, in the night.

MAY.

2.—A severe shock of earthquake at Los Angelos, Cal., in the night.

21.—At Truxillo, Honduras, several explosions in the mountains in the afternoon.

JUNE.

4.—Lake Ontario, at Oswego, suddenly rose three feet, during a thunder storm, and as suddenly fell again. This was repeated several times.

8.—A severe shock of earthquake in the Sandwich Islands.

JULY.

10.—A slight shock of earthquake at Freeport, Armstrong co., Pa., in the evening.

11.—A very violent shock of earthquake at Schemaka, in the Caucasus, throwing down three hundred houses and more than one hundred ships. Only one person was killed, and five wounded.

16.—Shock of earthquake at Richmond Va., and vicinity, at 20 minutes before 2 o'clock.

24.—A succession of slight earthquakes in the city of Mexico, at a quarter before 9 A. M.

AUGUST.

3.—Two shocks of earthquake at Valetta, between 2½ P. M., and 4½ P. M.

4.—Slight shock of earthquake at San Francisco, Cal., at 5.15 A. M.

5.—A violent shock of earthquake at Belize, Honduras, about 5 P. M., and occasionally a very slight trembling in the earth was felt up to the 27th. The same shock extended to the Islands in the vicinity, was felt in Jamaica, and was very severe at Omoa, where there were one hundred and eight shocks, and where it was felt for eight days, slightly.

14.—A slight shock of earthquake at Truxillo, Honduras, at 5:13 P. M.

15.—Two slight shocks of earthquake at Truxillo, Honduras, one at 6 minutes after midnight, and the other at 3:15 A. M.

18.—Earthquake at Kona, Sandwich Islands.

21.—Shocks of earthquake were felt throughout Algeria. They were slight at Algiers, strong at Constantina and Bona, and violent at Philippeville, where twenty-two successive shocks occurred, and several villages were destroyed. There was little loss of life.

26.—Two shocks of earthquake at Monterey, Cal., about 15 minutes before 9 P. M.

27.—Shock of earthquake at Monterey and Santa Cruz, California. Shock of earthquake at Belize, Honduras.

29.—Shocks of earthquake at Monterey and Santa Cruz, Cal.

SEPTEMBER.

17.—A slight shock of earthquake at Hickman, Ky., about 5 A. M.

20.—Severe shock of earthquake at San Diego, Cal.

26.—Shock of earthquake at city of Mexico and Puebla, at a quarter before 12 M.

The following earthquakes, of which the dates are not given, have occurred during the last twelve months: A severe shock of an earthquake at Porto Rico. Occasionally shocks of earthquake at St. Christopher, W. I. Several shocks of earthquake in Portugal, principally in the Algraves. Various shocks of earthquake have been felt in different parts of Spain. In Giozalema, a district not far from Seville, seven shocks took place in the space of an hour, causing whole hills to disappear. Several severe earthquakes at Guayquil, Equador. Shock of earthquake in the city of Mexico. A shock of earthquake at Soleure, Switzerland. A violent shock of earthquake in the Caucasus. Severe earthquake shocks in Kingston, Jamaica, and the town of Falmouth. A shock of earthquake at Broussa, Turkey.

Earthquakes have been less frequent in the twelve months embraced in this statement than heretofore for many years. We have never met with any record of earthquakes north of the 74th parallel of north latitude. On the western coast of South America, earthquakes are of very frequent occurrence; but on the eastern, in that portion in which Brazil and Buenos Ayres are situate, earthquakes are of very rare occurrence.

E. MERIAM, BROOKLYN HEIGHTS.

NEGLECT TO PUT UP LIFE-SAVING GATES AT THE FERRY BRIDGES.

1855, *Oct.* 25.—Mr. Thomas Secor, residing in Delaware county, New York, while stepping off the Jersey City ferry-boat, accidentally stepped between the boat and the bridge, and had one of his knees badly crushed. He subsequently died of his injuries.

Nov. 10.—A passenger for the 5¼ P. M. train, on the New York and Erie Railroad, stepped between the ferry-boat and the bridge as the boat was landing its passengers in Jersey City, and narrowly escaped being crushed. He was only saved by the timely warning given by a fellow-passenger to the engineer, who reversed the engine of the boat.

Nov. 18.—A man walked overboard at the Fulton ferry, on the Brooklyn side, under the impression that the boat which had entered the slip was made fast. He narrowly escaped being crushed between the boat and the bridge, but was eventually got out without injury.

Dec. 24.—About 5 o'clock P. M., as one of the Hoboken ferry-boats was approaching the landing at the foot of Barclay-st., a man named Thomas Rivington, residing at No. 334 Ninth-st., New York, a ship-fastener by trade, in attempting to step over the chain, tripped his foot, and was pitched headlong over the end of the boat against the bridge. In this position he was caught across the chest by the boat and horribly crushed, causing instant death. There was no cry or other sound, except the cracking of the bones. He leaves a wife and two children.

1856, *Jan.* 26.—About 6 P. M., a little girl about 8 years of age, daughter of Mr. Metlar, of No. 109 Grand-st., Jersey City, undertook to step off the boat before it was made fast to the bridge on the Jersey side, and fell between the boat and the bridge. She was rescued by Lemuel Alfred, a deck hand, who leaped into the water after her. He, however, narrowly escaped losing his own life in the attempt. When taken from the water he was so benumbed with the cold, and his wet clothing was so heavy, that he was rescued with great difficulty. The officers of the Br. steamer *Africa* witnessed the occurrence, being on the boat, and immediately subscribed $50 with which to present Mr. Alfred with a medal.

March 2.—A man named William Teasell fell into the water while attempting to get on board of one of the Fulton ferry-boats. He was rescued.

March 22.—A young man in his hurry to get on board the Fulton ferry-boat, jumped overboard. He was rescued after some trouble.

April 8.—As the Peck Slip boat was nearing the Williamsburg slip, a man with a child in his arms, thinking the boat was in, walked overboard. The man after a time was rescued, leaving the child screaming in the water, when the pilot jumped over and brought the child on shore.

April 26.—A man in attempting to leave one of the Fulton ferry-boats before it was secrued to the bridge, fell between the two, and would have been crushed but for the prompt action of some of the passengers, who dragged him out. He escaped with a slight bruise on the knee.

May 12.—Mr. Alfred Appleton, of New York, had the fingers of his left hand badly crushed, at the South ferry, by attempting to leave the boat before it was secured to the bridge.

June 17.—As a large wagon, heavily loaded with kegs of lager bier, was being driven off one of the Staten Island ferry-boats, at the Whitehall Slip, one of the chains supporting the bridge gave way. Two or three persons were a good deal hurt by kegs of the bier, which were thrown upon them by the sudden sinking of one wheel of the wagon. Mr. John P. Brown, of the well-known restaurant in Maiden Lane, experienced a sprain in his ankle, and some severe bruises. The others injured were employees of the Ferry Company.

June 21.—A man fell between the boat and the bridge at the Fulton ferry, and would have been crushed had not a powerful man seized him by the collar, and with an effort extricated him from his dangerous position.

July 6.—A middle-aged man jumped after the Fulton ferry-boat, on the Brooklyn side, striking the vessel with his chest, and thus falling into the river. He was rescued by the bridge-man.

July 15.—A boy named George Wells, about 16 years of age, residing in Bushwick, was drowned at the Grand-st. ferry, on the New York side. He attempted to jump from the boat to the shore, and fell between that and the bridge, and was not seen afterward.

July 29.—As the Jersey City ferry-boat was landing at the New York side, about 9½ P. M., two well-dressed and rather elderly gentlemen fell overboard. They were rescued. One of them said that he had lost $260 from one of his pantaloon pockets. His pocket was turned inside out: and it was his belief that it had been picked by some of the kind-hearted bystanders, who assisted him out of the water.

August 15.—A boy about 14 years old, who was standing outside the chain on the Hamilton Avenue ferry-boat, *Wyandank*, was thrown overboard and drowned, by the boat striking the dock on entering the slip on the New York side.

August 17.—A young woman named Rosa Reilly was drowned at the Jersey City ferry, by attempting to jump ashore from the boat before it was made fast to the bridge. The jury of inquest recommended to the Ferry Company the construction of gates upon their bridges to prevent persons leaving the boats until they are made fast.

August 20.—An unknown man fell into the dock at the Fulton ferry, Brooklyn, and was rescued by Officer Wright, of the Second District Police.

Sept. 1.—A woman had her leg crushed at the Fulton ferry wharf, by the ferry-boat, from which she attempted to step off before it was made fast.

Sept. 15.—As the Wall-st. ferry-boat, *Exchange*, was leaving the Brooklyn side, a lad, son of G. W. Gerau, Esq., while jumping after the boat, missed his footing and fell into the slip. After sinking twice, and while yet under the water, John Baulser, one of the boat hands, dove into the water after him, and rescued him in an almost lifeless condition.

Sept. 15.—As the Hamilton Avenue ferry-boat, *Montauk*, was entering the slip on the New York side, about 10¼ P. M., a man attempted to jump ashore before the boat was made fast to the bridge, and fell between the boat and the bridge, and had both legs severely crushed.

Sept. 18.—About 9 o'clock P. M., as the Hamilton Avenue ferry-boat, *Montauk*, was entering the slip on the Brooklyn side, a woman with a child in her arms about two months old, attempted to step from the boat to the bridge, previous to the boat being made fast, and fell between the two into the water, and would have been drowned but for the noble conduct of a sailor, whose name we could not ascertain, who jumped overboard and rescued her and the infant.

Sept. 19.—Arthur Lyons while attempting to jump on board one of the Catharine-st. ferry-boats, after it had left the dock, fell into the river, and was with difficulty rescued.

Sept. 20.—Jacob Warren, a colored man, employed on the steamboat, *Elm City*, was drowned at the Peck Slip Ferry Dock.

Oct. 5.—Another individual came near getting his leg smashed at the Fulton ferry, by leaving the boat before it had been secured to the bridge.

Oct. 14.—About 9 o'clock P. M., as the South ferry-boat, *Louisa*, was entering the slip on the New York side, a man named Michael Larkin fell overboard, forward the wheels, the boat passing clean over him. The alarm being given, two Whitehall boatmen put out from the slip in a small boat, and succeeded in rescuing him from a watery grave.

Oct. 14.—A man named John Dellan, an English sailor, in attempting to jump from the Peck Slip ferry boat, *Minnesota*, on the Williamsburg side, about 6¼ P. M., fell between the boat and the bridge, and was crushed to death. The deceased had a son and daughter living in Williamsburg. The boy had just gone out of the gate, when he heard that a man was killed. He came back and found it was his father. A German fell overboard on the New York side from the same boat, on the previous trip. He was rescued.

E. MERIAM, BROOKLYN HEIGHTS.

SHIP AND CARGO BURNED BY LIGHTNING.

The captain of the ship *William Hitchcock*, which was loaded with cotton and burned in lat. 45° 42′, lon. 47°, on December 19, 1855, in giving an account of the occurrence, says: "The lightning struck the mizzen royal mast, and passing below, the shock was so great I was satisfied we were injured. On examination I found the smoke to be raising from fore and aft of the ship, and in a few minutes we were unable to enter the cabins. Our only chance was to keep the fire under, until we could see some chance to abandon the vessel. After making every preparation, such as getting boats and provisions ready, we discovered a sail, and run for her. She proved to be the *General Parkhill*, of Charleston, Captain Pierce, who, as soon as he could understand our condition, kindly lay by us all night. Our ship became so hot that the cotton on deck, which had been taken from the hold, would take fire. At noon on the 20th, we succeeded in getting on board the *General Parkhill;* and the last we saw of our ship, she was a burning mass above on the ocean. We arrived at Liverpool on the 31st December. My men, as well as myself, lost all, except what we stood in."

LIGHTNING FIRE-BALLS FROM VOLCANIC ERUPTIONS.

March 2, 1856.—The ship's position was lat. 37° 30′ N., long. 70° 40′ W. Temperature of water 69°, air 28° Fahrenheit. The weather dark and lowering, with sharp lightning, and barometer falling fast. Ship under double-reefed topsail, foresail, and jib. At 2 A. M. commenced blowing hard, with heavy rain and sleet. At 2¼ A. M., while shortening sail, an immense ball of fire struck the main-royal mast-head, and then fell on the main hatch, where it exploded with tremendous force, filling the deck with fire and sparks, with continued explosions of the particles, like detonating powder or torpedoes. Owing to the ice, sleet, and snow with which the decks, bulwarks, rigging, and sails were covered, the fire was soon extinguished. About ten minutes afterward a second ball struck near the same place, but was driven by the force of the wind just clear of the ship's side to leeward, when it exploded with a loud report and great commotion. There were several men furling the jib at the time, and the concussion was so great that it lifted them nearly clear of the boom. The tornado lasted all next day and night, from N. W. by N. The air very cold, and water 69°, causing an immense exhalation from the gulf, which congealed as soon as it rose, and was driven furiously over the ship, excluding the very light of day. One of the men was knocked down and stunned for a time, but was not seriously injured. The mate was blinded by it, and probably will not recover the sight of both eyes. Had it not been for the ice, sleet, and rain which deluged the ship, there can be no doubt but that she would have been on fire from the truck to the water. The fore-topsail was blown out of the bolt-rope, and the royal mast-head seared as it were with a red hot iron, being all the damage the ship received, which, to say the least, was very providential.

The Indian mail brings advices of another of those dreadful earthquakes for which Ternati and the adjoining localities in the Moluccas are proverbial. An eruption of the active volcano in the island of Great Sangir, in long. 124° 50′ E., and lat. 3° 50′ N., has occurred. The north-western part of the island of Great Sangir is formed by the mountain Awu, which has several peaks, the highest being about 4,000 feet above the sea. On the west side the mountain runs very steep into the sea, at the height of the large village Kandhar, however, falling away to a low promontory.

Between 7 and 8 o'clock on the evening of the 2d of March, a sudden and altogether indescribable crashing noise was heard, which, indicating to the Sangirese an eruption of the volcano, filled them with consternation. Simultaneously with this, the glowing lava streamed downward with irresistible force in different directions, bearing with it whatever it encountered on its destructive course, and causing the sea to boil wherever they came in contact. The hot springs opened up, and cast out a flood of boiling water, which destroyed and carried away what the fire had spared. The sea, obedient to an unusual impulse, lashed the rocks with frightful violence, dashed upon the shore, and heaved itself with a wild haste against the land, as if it strove to overmaster the fire-stream.

This frightful picture of destruction, the horror of which was increased by the shrieks of men and beasts, the wild roaring of the tempest, and the crashing of thousands of trees torn up and carried away, was followed, about an hour later, by peals of thunder which shook the ground and deafened the ear. A black column of stone and ashes then shot up from the mountain to an immense height, and fell—illumined by the glare of the lava—like a shower of fire upon the surrounding country below, producing a darkness that, only now and then momentarily broken by the *flashes of lightning*, was so intense that people could not discern objects close at hand, and which completed their confusion and despair. Large stones were hurled through the air, crushing whatever they fell upon. Houses and crops which had not been destroyed by fire, sunk and disappeared beneath the ashes and stones, and the hill-streams, stopped up by these barriers, formed lakes, which, breaking over their banks, soon proved a new source of destruction.

This lasted some hours. About midnight the raging elements sank to rest; but on the following day, about noon, they again resumed their work of destruction with renewed violence. In the mean time, the fall of ashes continued without intermission, and was so thick on this day that the rays of the sun could not penetrate through it, and an appalling darkness prevailed.

Scarcely recovered in some degree from their fright, the inhabitants of this desolated part of Sangir were again disturbed by an eruption on the 17th of March, which destroyed many fields and a great number of trees on the Tabukan side.

Since then this volcano has remained quiet, and the only symptom of its working has been the smoke rising up in all directions from cracks and fissures in the ground. The streams of lava on the slopes are still so slightly cooled, that people dare not venture to any great distance from the shore. According to the accounts of the natives, the top of the mountain does not appear to have undergone any noticeable alteration.

On the other side of Kandhar, on the extreme north point of the island, the appearance of the devastation which has been caused is, if possible, even more frightful than what has taken place at Taruna. For here, where formerly there were to be seen extensive fields bearing all kinds of crops, and thickly-planted and endless groves of cocoanuts, we now find nothing but lava, stones, and ashes. The liquid fire seems to have flowed from the mountain at this point with irresistible force, and in prodigious quantity. Not only has this fearful flood, as it were, buried the whole district and all that was upon it, but, after having caused this destruction over an extent of several miles, it was still powerful enough, on reaching the shore, to form two long tarjangs (capes) at places where the depth of water formerly consisted of many fathoms.

A number of other districts and places have been, some wholly destroyed, others greatly injured by the fire.

The loss of life has been great It is estimated as follows in the undermentioned districts: Taruna, men, women, and children, 722; Kandha, men, women, and children, 45; Tabukan, men, women, and children, 2,039. Total, 2,806.

The greater number met their death in the gardens. They fled in all directions but were overtaken and swallowed up by the fatal fire-stream. Some tried to save themselves in the trees, but were either carried away with them or killed by the scorching heat. At Kalougan and Taryang the houses were filled with people who were stopped in their flight by the lava streaming down on all sides, and the streams of boiling water, and who met their death under the burning ashes and the tumbling houses. Many who had reached the shores, and thought themselves safe, became a prey to the furious waves, and many died through sheer despondency and agony.

E. MERIAM, Brooklyn Heights.

GUNNING.—SPORTING.

KILLING AND WOUNDING LITTLE BIRDS.

The following statement of deaths and injuries, resulting from the cruel and wicked practice of gunning, sporting, killing, and wounding little birds and unprotected animals, by unfeeling men and boys, witnesses that there is a fearful penalty attached to the commission of the offense. It will be found, I have no doubt, by a comparison of the list of deaths resulting from the use of their own guns or from those of their sporting companions, that more lives are annually sacrificed in this inhuman and degrading sport than are terminated on the gallows for murders committed within the same field of research.

This statement embraces a period of twelve months, viz.: from October 1, 1855, to September 30, 1856, during which there were 76 persons killed, and 42 wounded. Total, 118 persons. Many of the wounded are not expected to recover. The following are the details:

OCTOBER, 1855.

4.—A boy named Smith, wounded at Orange, New Jersey. by the discharge of his fowling-piece. A boy named William McCar drowned at the foot of Hammond-st., New York, while drowning a cat.

11.—Officer Lassell, of Boston, while out with a party gunning, was wounded by one of his companions who was firing at a squirrel.

14.—Willard and D. S. Younger were drowned in Ipswich bay, Mass., while gunning.

15.—Mr. D. D. Floyd, of Newburyport, Mass., was accidentally killed while gunning.

21.—Edwin S. Keeler, of Bordentown, N. J., lost his life while gunning.

25.—Charles Higgins, a boy, residing near Alton, Ohio, killed his mother while gunning.

30.—Mr. Henry Franklin, of North Attleboro', was killed by the discharge of his gun.

31.—Lewis Stricklet, of Concord, Ky., was killed by the accidental discharge of his gun. A young man named Cowdry, while gunning near Cabourg, Canada West, was killed by the discharge of his gun.

NOVEMBER.

1.—Henry Taber, of N. Fairhaven, Mass., was badly wounded by a companion while gunning.

2.—A party of young men from Ontario, N. Y., on a hunting excursion to Sodus bay, lost one of their companions by the discharge of his gun, which scattered his brains in every direction.

10.—Leander Earle, of Boston, lost his life, while on a gunning excursion, by the discharge of his gun.

13.—A young man named De Witt, in Warren county, N. J., was killed by two sportsmen from Easton.

16.—Joseph Annin was badly wounded while gunning at West Hoboken.

19.—Samuel Hicks was shot dead by a companion while gunning in Henrico county, Va.

29.—Mr. Edward Dougherty, while gunning near Bergen, N. J., shot himself, from the effects of which he soon died. Justin Higgins, of Detroit, Mich., accidentally shot himself, causing his death. A number of the Washington *Star*, of November, gives the particulars of three deaths, and one badly wounded, of persons while gunning.

DECEMBER.

8.—Hon. Charles Mason, of Hamilton, N. Y., was badly wounded while out gunning. Mr. Lemuel Barrett, of Council Bluffs, was found frozen to death, and much mutilated by wolves, etc. He started on an elk-hunt in company with two others, one of whom had succeeded in getting home, and the other had not been heard from.

14.—Two persons belonging to Chippewa, Canada, while fowling in a boat, were carried over the Falls.

19.—John McCallig, while gunning on Long Island, accidentally shot himself. He died on the 23d.

26.—A young man left Mexico, Oswego county, on a hunting excursion, and has not been heard of since.

31.—A man named Bartholomew, of Belvidere, Ill., was accidentally shot by a comrade while hunting rabbits. He lost both eyes.

JANUARY, 1856.

3.—A countryman found in Chicago, Ill., dead, with his wagon and load of game on top of him. J. W. Gillman, of Jonesborough, Me., while at work in a saw-mill, attempted to kick a dog, when he struck a saw, and had his foot cut off.

Jules du Callier left St. Louis on a hunting expedition, with a man named Hull, and was found in the woods, shot through the heart.

30.—Lyman H. Lincoln, while fox hunting in Shrewsbury, Vt., accidentally shot himself, causing his death next day.

MARCH.

23.—Mr. W. J. Hatch, of Camden, N. J., was killed by a man named Lennairs, who was gunning on his grounds. Lennairs was sentenced to twenty years' imprisonment with hard labor. The only son of George Lynn, of Washington, while hunting, accidentally killed himself.

25.—Crawford Kurtz accidentally killed himself, in Buffalo, while shooting rats. A. McScarlett, of Noble county, Ind., killed himself by the accidental discharge of his rifle.

APRIL.

4.—Solomon Ostrander, of Ottawa, Iowa, went out hunting, and has not been heard of since.

10.—Charles Grant accidentally shot himself, in Ulster county, N. Y., causing his death on the 15th. A son of John Whitney, of Chicago, Ill., while out fowling, was accidentally shot by a companion.

11.—Mr. L. P. Berthrong, of Rochester, while hunting in Cayuga county, accidentally shot himself, causing his death next day.

15.—A boy named Patrick, died at the New York Hospital, from the effects of a wound received from a companion while gunning.

16.—George Wilds accidentally killed himself, while shooting muskrats, near Paterson, New Jersey.

Mr. Jackson Huddleson, while gunning in Fayette co., ——, mistook a little boy for a deer, and shot him, causing his death in a few hours.

21.—At Horicon Lake, Wisconsin, a Mr. Rich, in firing at a loon, shot a man dead.

24.—Mr. Smith, while hunting near Macon, Georgia, shot a Mr. Atkins dead, having mistaken him for a wild turkey. Mr. Atkins was also hunting. A Mr. Cose, of Bedford co., Pennsylvania, started out to hunt, and was followed by his two children. The children were not found for twelve days, when they were found starved to death. The mother has since died of grief at their loss, and the father lies in a critical condition.

MAY.

2.—Duncan Gray was killed by the accidental discharge of his gun in Jasper co., Iowa, while going a hunting.

A Chippewa Indian, named Watal, was shot dead while shooting ducks in Benton co., Minnesota.

21.—James Sanborn was accidentally shot at Lowell, Mass., causing his death.

24.—A man at Durham, Canada, in firing at some pigeons, killed a young man named McLean.

31.—John Marsh, of Exeter co., New Hampshire, was killed by the accidental discharge of a gun, while trying to shoot an eagle.

JUNE.

6.—James H. Wilson, of Williamson co., Tennessee, accidentally shot himself dead, while shooting birds.

7.—A son of Lyman Adams of Utica, with two other boys, while firing at some birds the barrel exploded, wounding himself and one of his companions.

12.—Dr. J. R. Terry, of New York, was badly wounded by a pistol procured for shooting rats. Mr. Lewis Gray, of Sampsonville, Ulster co., was killed by the bursting of a gun. Adam Lewis fell from the roof of a four-story house at Cleveland, while firing at a flock of pigeons.

14.—Charles Morgan, of Fayetteville, New York, was killed by the accidental discharge of his gun. Captain H. Garmany, of Ringgold, Georgia, while shooting birds, accidentally shot himself, causing his death in about twenty hours. Walter James, while deer-hunting at Rice Lake, had a dispute with three Indians, and, using his hunting-knife, disabled all three of them, wounding them badly.

17.—Mr. John Combs, of Beetown, Wisconsin, while hunting, accidentally shot himself dead.

21.—Conrad Schellings, of Westminster. Md., was killed by the accidental discharge of his gun.

24.—A man living in Somer's Court, Philadelphia, shot his own child by the accidental discharge of his gun. He is not expected to survive. Mr. Edward Gentry, of Hamilton, Canada, had his hand badly shattered, by the bursting of his gun while fowling.

26.—A boy who resides in Broome-st., New York, was wounded in the hand while shooting rats.

A man near Detroit, Michigan, while shooting birds, accidentally killed a young lady.

JULY.

1.—Ebenezer Whitney, of Nelson, New York, killed himself while trying to shoot a squirrel.

4.—Mr. H. E. Austin was frightfully wounded by the accidental discharge of his gun, while shooting pigeons at Rockford, Illinois.

9.—Mr. Samuel James accidentally killed himself, while hunting in Steuben co., New York.

11.—A boy had his left hand badly fractured by a companion, while hunting on Clove road, Brooklyn.

14.—Mr. Van Graves, of Chesterfield, Virginia, while hunting with his son, was instantly killed by the accidental discharge of his son's gun.

16.—Franklin Bristow lost his life while hunting at Ontario, Wayne co., New York, by the accidental discharge of his gun.

Martin Bromley, of North Chili, New York, lost his life by the accidental discharge of his shot-gun.

25.—James G. Bolles was killed by lightning, near Topeka, Kansas, while on a hunting expedition.

28.—Safer Schutts, a German, was wounded at Buffalo, New York, by the bursting of his gun while shooting small birds. A man at Green Farms, Connecticut, dangerously wounded by the discharge of a gun in the hands of a companion.

AUGUST.

1.—In Pike co., Alabama, two brothers named Dorn, were gunning, when one accidentally killed the other.

2.—Two men shot in San Francisco, California, by the accidental discharge of a gun; one died soon after.

8.—Silas M. Burroughs, of Medina, New York, accidentally shot himself while gunning, and lies in a critical condition.

9.—A young man named Smith accidentally shot himself through the lungs, while out gunning near Lexington, Connecticut. Augustus Howell, of Powerville, New Jersey, accidentally killed himself while shooting woodcock.

11.—Two boys shot at Peekskill, New York, by a man firing at a bird. There is hopes of their recovery.

12.—Joseph Loud shot by a companion while gunning at New Bedford, Mass. His wounds are not mortal.

16.—Mr. Francis L. Lord was shot by the accidental discharge of a gun, while fowling at Baldwinsville, Mass. He is not expected to survive.

17.—Harrison Miller was shot by a companion, while gunning at Gerry, New York. He was not expected to recover. Mr. N. Ballard fell from a tree breaking his neck, at Hampton, New Hampshire, while trying to get at a squirrel he had shot.

18.—Robert Miller accidentally shot himself in Berwick, Maine; he is not expected to survive.

21.—Mr. Moss, of Turk's Creek, ——, while hunting, was shot by a companion, who mistook him for a panther.

23.—A son of Mr. E. Oliver was badly wounded at S. Reading, Mass., by the accidental discharge of his gun while fowling.

24.—A man shot and wounded by two sportsmen, who were gunning near Baltimore. A young man shot at Grafton, New York, by a companion while gunning. He will be a cripple for life. A party of boys were gunning at Milan, New York, when one accidentally shot another through the heart.

25.—A man seriously injured, by a companion shooting him, while gunning near Princeton, New Jersey.

26.—Hon. William Halsted was badly wounded at Trenton, New Jersey, by the accidental discharge of a gun.

29.—Two children shot and wounded by a man near Troy, New York. A sportsman shooting at a duck in Horicon Lake, Wisconsin, shot a man through the heart near by. The ball struck a wave, and bounded back in a line varying only about fifteen degrees.

SEPTEMBER.

6.—William Doughty was shockingly wounded by the accidental discharge of his gun, near Camden, New Jersey, while fowling. Albin C. Bean was shot by a companion, while gunning at Candia, New Hampshire, causing his death.

7.—A man shot dead in Bethlehem, New York, by persons who were hunting on his grounds. The murderer was arrested.

9.—A man named Allen shot and killed a woman in Woburn, Mass. He was arrested.

16.—Mr. F. H. Ayres was severely mangled in a contest with a grizzly bear in California.

18.—Thomas M. Vinal, of Scituate, Mass., while gunning, was instantly killed by the accidental discharge of his gun.

19.—Thomas Webb was instantly killed at Tarrytown, New York, by the accidental discharge of his gun, on his return from a hunting excursion.

24.—Dr. William H. Allen, of Machias, Maine, was instantly killed by the accidental discharge of his gun, when returning from a hunting excursion.

25.—William Smith was instantly killed by the discharge of his gun, near Danville, New Jersey, while gunning.

26.—A man in Rockland co., New York, was wounded by the accidental discharge of a companion's gun, while out gunning.

E. MERIAM, BROOKLYN HEIGHTS.

DEATHS AND INJURIES FROM THE USE OF CAMPHENE

And other preparations known as SPIRIT-GAS, BURNING-FLUID, etc., etc., for the purpose of illumination, within the field of our research, during twelve months, viz.: from October 15th, 1855, to October 15th, 1856.

Killed, 57.

Injured, 106, 16 of whom are not expected to recover.

Amount of property destroyed, in such cases where the amount was stated, $104,095.

These details show that our field of research is a limited one, and yet the deaths are very numerous. Burning.fluids should not be used in a building of any kind for the purpose of illumination.

OCTOBER 1855.

15.—A camphene lamp exploded at 193 Canal-st., New York, and set the place on fire.

24.—A camphene lamp exploded at 142 West Thirty-fifth-st., and set the place on fire. Mr. Hamm was badly injured by the breaking down of the stoop while taking out a barrel of camphene.

29.—A camphene lamp exploded in Union Square Post Office, and set fire to the building.

NOVEMBER.

2.—Mrs. Moore, of Norway Village, Maine, was badly burned by the explosion of a can of fluid while filling a lighted lamp. She died next day.

5.—Mr. Charles Lever was fatally burned, at 180 West Forty-first-st., New York, by the explosion of a fluid lamp which he was filling while lighted. He died next morning. Mr. Tatem was burned to death, in Paget's parish, Bermuda, by the explosion of a camphene lamp.

8.—John Foley was seriously injured in a saloon, under Franklin Market, New York, by the explosion of a camphene lamp, which he was filling while lighted.

12.—Josephine Cromwell was so badly burned at Gowanus, Long Island, while pouring fluid into a camphene lamp, that her life was despaired of.

13.—A camphene lamp exploded at 119 Roosevelt-st., New York, setting fire to the building.

15.—Mrs. Fisher was so dreadfully injured by the explosion of a camphene lamp, which she was filling while lighted, that it is feared she will not survive. She resided in the rear of 284 Second-st., New York.

19.—Miss Mary Schaffer, aged 15 years, was dreadfully burned by the upsetting of a camphene lamp, in Baltimore. Her flesh was so burned as to drop off in pieces. She died next morning.

22.—Mrs. Walter, of Rahway, New Jersey, while sitting at a table sewing, was so badly burned by the explosion of a fluid lamp, that she died next day.

29.—A girl named Bertha Meyers, aged about 15 years, was badly burned by the explosion of a can of ethereal oil, with which she was filling a lighted lamp. A negro man lost his life in Maysville, Ky., by having camphene poured on his head and fire set to it, while asleep, to awaken him.

30.—A fire at East Haddam, Connecticut, caused by the bursting of a camphene lamp, destroyed property estimated at $10,000. A young man came near losing his life, in Baltimore, by a camphene explosion. The house was near being destroyed. A daughter of Mrs. Edward Gannett, of Lowell, Massachusetts, was so badly burned by the explosion of fluid lamps, that for some time her life was despaired of. She was lighting one lamp at another, when both exploded.

DECEMBER.

4.—Mrs. Handy died at 131 Suffolk-st., New York, from the effects of burns received last September by the explosion of camphene. At Waterville, Maine, a boy aged 4 years was shockingly burned by the explosion of a fluid lamp.

11.—A fluid lamp exploded at Dr. J. Smith's, Brooklyn, setting the place on fire, and destroying several hundred dollars' worth of dentist's materials.

14.—A camphene lamp burst in James-st., Brooklyn, causing an alarm of fire.

22.—Mrs. A. Amendi, residing at 77 Murray-st., New York, was terribly burned by the explosion of a camphene lamp.

23.—A crockery store, in Av. A, New York, was set on fire by the lighted wick of a fluid lamp setting fire to a can of camphene. Mr. Miller was badly burned. Loss, $75.

26.—Mrs. Harrison, residing in Lorimer-st., Brooklyn, died from burns received by the explosion of a fluid lamp. Her husband was severely burned, but not dangerously.

31.—A camphene lamp burst at 369 Grand-st., New York, causing an alarm of fire.

JANUARY, 1856.

3.—A fire occurred at 199 Mott-st., New York, from a camphene lamp being thrown down.

9.—The camphene lamps in an omnibus at Bloomington, Ill., fell and burst, burning the omnibus. Loss, about $400.

12.—The still exploded in the Alcohol, Pine-oil, and Burning Fluid Manufactory, in Camden, New Jersey, scalding two men seriously; one died shortly after.

17.—A camphene lamp exploded at 359 Tenth Av., New York, and set fire to some goods.

19.—A camphene lamp exploded at 184 William-st., New York, burning five persons badly, and setting fire to the place. Mr. Stenle, one of the injured, died on the 27th.

21.—Mrs. Sarah Elliott, of 121 East Thirty-ninth-st., New York, was so badly burned by the explosion of a fluid lamp, that she died next day.

23.—Catharine McGuire, of 65 Pitt-st., New York, was so badly burned by the explosion of a fluid lamp, that she died on the 25th. Miss Cecilia Hubbard died at Baltimore, from injuries received by the explosion of a camphene lamp.

FEBRUARY.

1.—A camphene lamp exploded at 73 Roosevelt-st., New York, setting the place on fire.

6.—A young woman in Mr. Armstrong's, Carmine-st., New York, was seriously burned by the explosion of a fluid lamp.

8.—Mrs. Gardner, of Front-st., Brooklyn, was severely burned by the explosion of a fluid lamp.

25.—A camphene lamp exploded at 59 Sheriff-st., New York, burning Mrs. Klime severely, and set the building on fire.

27.—A fire occurred, in Washington-st., Albany, caused by camphene taking fire while filling a lighted lamp. A girl severely burned in Myrtle Av., Brooklyn, by the upsetting of a camphene lamp. Mrs. Catharine Peuhler and her daughter, residing in Baltimore, severely burned by a camphene lamp.

MARCH.

4.—A little girl badly burned at 719 Myrtle Av., Brooklyn, by the explosion of a camphene lamp.

6.—A little girl badly burned in Smith-st., Brooklyn, by a camphene lamp.

13.—A camphene lamp exploded at 186 Pearl-st., New York, setting fire to the building. Another exploded in a fancy goods store, 410 Pearl-st.

17.—A crockery store in Division-st., New York, set on fire by camphene, and a man badly burned.

20.—Mrs. Timms was so badly burned by camphene, at 364 Pearl-st., New York, while filling a lighted lamp, that she died on the 30th; a little child was also injured. A camphene lamp exploded in Elm-st., near Grand-st., causing an alarm of fire. A child of Mr. Charles Allen, of Gowanus, Long Island, New York, severely burned by the explosion of a camphene lamp.

21.—Mary Ford severely burned at 21 Hester-st., New York, by the ignition of camphene while filling a lamp.

24.—Mrs. Frances Long seriously burned at 172 Delancey-st., New York, by the explosion of a camphene lamp; it caused considerable damage.

26.—A house in Bushwick, Long Island (worth $900), burned down by fire caused by the explosion of a camphene lamp; and another damaged to the amount of $600. Three persons badly burned in Baltimore, by the explosion of an ethereal oil lamp.

APRIL.

1.—A camphene lamp exploded at 152 Canal-st., New York, setting the place on fire and burning a man badly. Damage, $150.

5.—A camphene lamp exploded at 375 First Av., New York, destroying the contents of a barber's window.

8.—No. 261 Third Av., New York, damaged to the amount of $250, supposed to be caused by a fluid lamp.

10.—A fluid lamp and can exploded at 250 Stanton-st., New York, burning five persons dangerously, and setting the building on fire; Mrs. Cohen, one of the injured, it is feared can not recover.

12.—Mrs. Swartz severely burned at 27 Madison-st., New York, by the explosion of a camphene lamp; it caused an alarm of fire.

MAY.

11.—Rachel Stuart died from the effects of burns received by the explosion of a camphene lamp, corner of Seventh Av. and Eleventh-st., New York.

21.—House No. 79 West Forty-sixth-st., New York, was set on fire, supposed to be caused by the explosion of a fluid lamp. Miss Charlotte Janes, aged 15, daughter of Bishop Janes, of Baskenridge, New Jersey, so severely burned by the explosion of a camphene lamp, that for some days her life was despaired of.

30.—Miss Mary Anne Young badly burned by the explosion of a fluid lamp, at Philadelphia; recovery doubtful. The oil works and turpentine still of Mr. E. C. Holbrook, at Wakulla, Fla., were destroyed by fire. Loss, some $15,000. Mr. Collins, formerly of Brooklyn, New York, was at work in the building when the explosion of gas occurred, and was covered with flames. He ran for the river, some 200 feet distant, and plunged in. The unfortunate man was rescued from the water, and lingered about thirty hours in the most excruciating agony, when death relieved him.

31.—A girl about 12 years of age severely burned by the explosion of a fluid lamp, in Newark, New Jersey.

JUNE.

5.—A young man in Chicago had a narrow escape by the ignition of a barrel of alcohol from a spirit lamp in his hand while in the act of drawing some alcohol.

7.—A camphene lamp exploded in 305 Bleecker-st., New York, setting fire to the place.

9.—A camphene lamp exploded at 48 Eighth Av., New York, burning two persons badly. A camphene lamp exploded in a house in Water-st., Philadelphia, frightfully burning a young lady, and setting fire to the furniture.

10.—A camphene lamp and can burst on board of bark *Rolla*, in lat. 32°, long. 75°, settting fire to the cabin, and burning the steward so badly that he died in forty-eight hours.

11.—A dealer in explosive burning fluid had his sign (a highly variegated lantern) destroyed by the fluid, on Fulton-st., Brooklyn.

18.—A camphene factory, in West Twelfth-st., New York, took fire and was damaged, in stock and building, $450.

20.—A camphene lamp burst in a dry goods store in Salmon Falls, N. H., setting the place on fire, and consuming $5,000 worth of stock.

23.—Mr. Lord and his wife badly burned on a barge at New Brunswick, New Jersey, by the explosion of a fluid lamp. Mrs. L. died of her injuries.

24.—A little girl in Albany, daughter of Joel White, badly burned by the explosion of a camphene lamp.

25.—A camphene lamp exploded in 86 Ann-st., New York; and another at 99 Gold-st. A little girl named Lyons, severely burned in Philadelphia, by the explosion of a fluid lamp. A son of Mr. John Regan, of Lynn, Mass., so badly burned by the explosion of a fluid lamp, that he died next morning; the room was also set on fire.

26.—A little girl named Scott, in Albany, badly burned by the explosion of a camphene lamp.

27.—Mr. J. W. Paramou, of Cleveland, Ohio, and his niece, severely burned by the explosion of a camphene lamp. The condition of the latter is critical.

JULY.

1.—A fluid lamp burst at 212 Myrtle Av., Brooklyn, setting the place on fire, and burning one person severely.

3.—A family of five persons terribly injured by the bursting of a camphene lamp on Sugar river, Indiana. The mother died in fifteen hours, and the other four are not expected to live.

4.—Ellen Mallen very severely burned at 285 Ninth Av., New York, by the explosion of a camphene lamp.

6.—A camphene lamp exploded in the hands of Mrs. Ryan, Albany, injuring her painfully. A little girl in Providence, Rhode Island, so severely burned by the explosion of a fluid lamp, that she died next day.

10.—A stable, corner of Thirty-ninth-st. and Broadway, New York, destroyed by the explosion of a barrel of camphene. Loss, $300. A boy named Smith so severely burned that he died on the 23d.

12.—Catharine Fay so badly burned by the bursting of a camphene lamp, at 80 Catharine-st., New York, that she died on the 23d.

13.—Two negro women and two children burned to death near Smithfield, Virginia, by fire from camphene; and three children so badly burned that they are not expected to recover. The owner would have refused $1,000 for each of the women.

18.—Mary Herbert so badly burned at 69 Prospect-st., Brooklyn, by the explosion of a fluid lamp, that she died on the 3d of August. The place was set on fire.

19.—A fluid lamp exploded in the drug store corner of Forty-fourth-st. and Ninth Av., New York, and falling on the head of Mr. H. Gertzen, burned him in a dreadful manner. F. Betz was also severely burned. The stock was damaged by fire to the amount of $25. A fluid lamp exploded at 131 Endicott-st., Boston, burning a Mrs. Smith very badly.

20.—A fire broke out in Messrs. Siddon & Zennis's Camphene, Turpentine, and Alcohol Distillery, Furman-st., Brooklyn. It was soon extinguished.

21.—Mrs. Lee was so badly burned by the breaking of a camphene lamp in Albany, that she died on the 29th. Miss Margaret Fitzpatrick, residing in Baltimore, so badly burned by her clothes taking fire from an ethereal oil lamp, that she died on the 24th.

22.—A camphene lamp exploded in a house in Liberty-st., Albany, burning two persons severely.

23.—A fluid lamp exploded in Newark, New Jersey, burning Mrs. Ticknor and her son, the latter so badly that he died in five hours.

24.—A young lady in Portsmouth, New Hampshire, had her dress burned off by some burning fluid taking fire. She escaped injury.

24.—A little girl named Foster, aged 13 years, at Jamaica, Long Island, so badly burned by the explosion of a fluid lamp that she died next day.

26.—A camphene lamp burst at 175 Division-st., New York, setting the store on fire. Damage about $60. A camphene lamp exploded in a house in Atlantic-st., Brooklyn, burning one person badly.

29.—A fire occurred in Boston, caused by the ignition of camphene (by a cigar) while being drawn from a barrel, which destroyed property to the amount of $60,000; causing the loss of nine lives, and four badly wounded, besides several persons missing. A camphene lamp burst in a house corner of Sixth and Fourth-sts., South Boston, severely burning Catharine Blackman, and setting the house on fire.

30.—A camphene lamp exploded in a grocery store, corner of Arch and Pearl-sts., Albany, setting the place on fire. Sarah Moore, aged 22, died at the Penn. Hospital, Philadelphia, from the effects of burns caused by the explosion of a fluid lamp.

31.—A house in Third-st., Philadelphia, was set on fire by the bursting of a fluid lamp. Not much damage done, except to furniture.

AUGUST.

1.—A camphene lamp exploded in Mr. John Bale's, Bellville, New Jersey, burning the girls badly, and killed a child.

4.—A camphene lamp exploded in a house in Lumber-st., Albany, burning a Mrs. Stevens. A camphene lamp exploded at 302½ Bleecker-st., New York, burning a domestic in a shocking manner, and set the house on fire.

6.—A camphene lamp exploded at 137 Washington-st., New York, setting fire to the premises.

12.—A fluid lamp exploded at 33 Butler-st., Brooklyn, setting the house on fire, badly burning the servant-girl, and nearly causing the death of a young child. Damage to the house, $60.

13.—A camphene lamp exploded in a saloon on Broadway, Albany, burning one person so bad that his life is despaired of, and doing considerable damage to the fixtures.

16.—A camphene lamp exploded in the building corner of Marion and Spring-sts., N. Y. A camphene lamp exploded in a house in Lincoln-st., Boston, enveloping a Miss Norton in flames. She ran into the street with the blaze rising all around her from her waist to her head, when a man succeeded in tearing her clothes from her body before she was very seriously injured.

A camphene lamp exploded in Covington, Ky., burning a little girl, named Broaddus, to death. At Elizabethtown, N. J., two boys were playing with camphene, when one of them poured a liberal quantity on the clothes of the other, and then set fire with a match. The boy ran into the street enveloped in flames, and before his clothes could be torn off, was badly, though not dangerously, burned.

19.—The burning-fluid and camphene manufactory in Washington-st., Philadelphia, caught fire from the explosion of a fluid lamp, and the building (two story brick), with its contents, was entirely destroyed.

21.—Bridget Green, residing at 38 Oak-st., N. Y., was dangerously burned by the explosion of a can of camphene.

23.—A camphene lamp exploded at 69 West Broadway, N. Y., setting the place on fire. Two young women burned to death in St. Louis, Mo., in consequence of their clothes taking fire while filling a lighted gas lamp.

30.—Elizabeth Baker died at 200 Avenue B, N. Y., from the effects of burns received by the upsetting of a camphene lamp.

SEPTEMBER.

6.—A camphene lamp exploded in the Reformed Dutch Church in 152d-st., N. Y., setting the building on fire, and burning Geo. Ingles, the sexton, so badly that he died soon after. The building was damaged to the amount of $300. Mrs. Charlotte Morgan died at 138 West-st., N. Y., from burns received in December last, by the explosion of a fluid lamp.

10.—A camphene lamp burst at 85 Fourth-st., N. Y., setting the place on fire. Damage about $25.

11.—A camphene lamp exploded at 18 White-st., N. Y., burning John Drinker, jr., so badly that he died on the 18th. A camphene lamp exploded in the window of a boot and shoe maker in Second-st., Brooklyn, breaking several panes of glass.

12.—A camphene lamp exploded on the canal boat *John Smith*, near Port Jackson, N. Y., burning the captain's wife and two children. The captain threw one of the children overboard to quench the fire, when it was drowned. The mother is not expected to recover.

13.—A camphene lamp exploded in a house in Warren-st., Brooklyn, injuring one person badly, and setting the house on fire.

14.—A camphene lamp exploded on board the schooner *Banquet*, lying at the foot of Delancey-st., N. Y., burning a colored man dangerously. Mr. John Cross was severely burned at Hudson, N. Y., by a camphene lamp.

16.—A camphene lamp exploded at 14 Allen-st., N. Y., seriously burning Louis Attenwalder. Mrs. Price, together with her servant-girl, residing at the corner of Willet and Houston-sts., were dangerously burned by the explosion of a camphene lamp.

18.—William Manning and his wife seriously injured, by the bursting of a camphene lamp, corner of Pearl-st. and Franklin-place, Brooklyn. An elegant fluid lamp was burned up on Fulton-st., Brooklyn.

21.—Mrs. Jackson was severely burned at Lockport, N. Y., by the explosion of a fluid lamp.

23.—A grocery store, No. 13 Hicks-st., Brooklyn, burned down by the explosion of a camphene lamp. Loss about $3,000. A fluid lamp exploded in Montgomery-st., Albany, burning Mrs. Carroll so badly that she died on the 25th.

25.—A camphene lamp exploded at 150 Ludlow-st., N. Y., which set fire to the building. A camphene lamp exploded in a house on Chapel-st., Albany.

OCTOBER.

1.—A young woman, named Mary Haven, cook on a canal boat, died in Tompkins co., N. Y., from the effects of burns received by the fall and breaking of a camphene lamp. Four other persons were badly burned.

2.—Mrs. Myers, residing at the corner of Stagg and Morrell-sts., Brooklyn, so badly burned by the explosion of a fluid lamp, that she died on the 4th. Mrs. Jane Littlefield, of Rockport, Mass., was burned to death by the explosion of a can of burning fluid.

3.—A child of Mr. James Hollingsworth, of Newark, N. J., aged ten years, so badly burned by the explosion of a can of camphene, in her hands, that she died on the 4th.

6.—Elizabeth Jackson died at the New York Hospital, from the effects of burns received by the explosion of a camphene lamp. A store and dwelling burned down in Mount Vernon, Westchester co., N. Y., by the explosion of a can of burning fluid. Loss $5,000.

7.—An ethereal oil lamp exploded in Pittsburg, Pa., horribly burning five persons—two of them, it is feared, fatally.

9.—A camphene lamp exploded at 160 Johnson-st., Brooklyn, E. D., which burned the store and dwelling, and considerably damaged an adjoining building. Loss $2,500.

10.—A fluid lamp burst in Boston, badly burning a young woman, named Bridget Cocklin.

12.—A camphene lamp exploded in Albany, burning a little girl, named Morrison.

E. MERIAM, BROOKLYN HEIGHTS.

DIRECTIONS FOR RESTORING PERSONS APPARENTLY DROWNED.

I have received the following from R. B. FORBES, Esq., of Boston, an officer of the Massachusetts Humane Society.

Convey the body to the nearest house, with head raised. Strip and rub dry. Wrap in blankets. Inflate the lungs by closing the nostrils with thumb and finger, and blowing into the mouth forcibly, then pressing with hand on the chest. Again blow in the mouth and press on the chest, and so on, for TEN MINUTES, or until he breathes. Keep the body warm, extremities also. Continue rubbing. Do not give up so long as there is any chance of success.

SAFETY DURING THUNDER-STORMS.

Many persons suffer greatly from fear during thunder-storms, and I have recorded cases of death from such fear.

My investigations and researches into lightning phenomena extend over a period of more than forty years, and the memoranda which I have thus been enabled to make are probably the most minute and most extensive in existence. The testimony of this immense memoranda presents the following results:

1st.—I have met with no account of loss of human life by light-

ning in a STEAMBOAT, IRON VESSEL, IRON BUILDING, or in a WAREHOUSE FILLED WITH IRON, or in a RAILROAD CAR. *Steamboats* have been in use more than sixty years, *railroad cars* thirty years, and *iron vessels* and *iron buildings* about twenty years. This puts at rest the objection so often raised, that metals are most dangerous for the reason, they say, that metals attract lightning. That metals conduct and distribute lightning is clearly evident, but how far metals attract lightning, is a matter of conjecture; but I am free to express this opinion—that a building with a metallic rod or rods is no more liable to be struck by lightning than a building without such necessary appendages, and when struck is protected, as are also the inmates of the building.

It is often seen that mankind are more ready to take counsel of their fears than to seek after that truth that is to be found everywhere in nature.

To the man who objects to having metallic lightning conductors on his house or his vessel, because, forsooth, he says, "metals are dangerous, they attract lightning," I at once appeal to his own experience and observation, and inquire of him whether he has ever known or heard of a death by lightning in a steamboat, where metals are most abundant; or in a railroad car that runs on iron wheels on an iron track, and is drawn by an iron locomotive; or in an iron building, or iron ship, or warehouse filled with bar iron or iron castings? A moment's reflection, a moment's consideration, compels him to give a reply in the negative. Then I inquire, what are your fears based upon? He stands mute, unable to make a reply.

Second.—Letters which I have received, from time to time, from the Secretaries of the Navy of the United States, state that none of the vessels of the U. S. Navy have received any damage by lightning if the conductors were up.

Third.—In 1839 the British Board of Admiralty organized a commission to inquire into the cases of damage by lightning to vessels in the English Navy. That commission was a long time in session, and made an elaborate report, in the conclusion of which they say that no case of injury or damage by lightning has been experienced by any vessel in the English Navy, if the conductors were up and the continuity uninterrupted to the water.

Fourth.—The marine Insurance Companies in New York make a deduction of 2½ per cent. on the premium of insurance on all vessels furnished with conductors. There is no case on record of a claim being made on marine underwriters for loss or damage by lightning to a vessel furnished with metallic lightning conductors, but they have paid millions of dollars for losses by lightning where the v sels were without conductors.

I regard these facts as conclusive to the protection which light conductors afford upon the ocean.

In August, 1843, I addressed a letter to Commodore Stringh of the U. S. Navy, Commandant of the U. S. Navy Yard, Brook in relation to the size of lightning conductors used in the Navy of the U. S. The following is a copy of his reply:

COMMANDANT'S OFFICE, NAVY YARD, BROOKLYN,
August 10th, 1843.

SIR: In reply to your note, I have to state that the iron used for conductors of vessels of war in the navy, is of the following dimensions, viz.:

For sloops of war, one quarter of an inch in diameter.

For frigates and ships of the line five-sixteenths of an inch.

Respectfully your obedient servant, S. H. STRINGHAM.

E. MERIAM, Brooklyn.

The cost of iron wire of the size mentioned in Commodore Stringham's letter is less than a cent per foot, and when made into a chain, to render it portable on board a vessel, will not cost to exceed from six to seven cents.

Fifth.—I have known or heard of but one instance of loss of life by lightning in a building provided with a metallic conductor of any kind *reared for the purpose of protection*, and that was a house struck by lightning on the 8th of July, 1855, at North Prairie, Wisconsin, in which a person was instantly killed. This house was furnished with a lightning conductor. I have received several letters from Wisconsin in relation to this case of lightning, but none of them have accounted for the failure of the rod to conduct the lightning. I think if I could have examined the house myself I could have discovered the cause of the failure, and perhaps it may be in my power to make that examiation.

I have thus briefly stated the facts showing the absolute protection that lightning conductors afford to human life, and also to property; also, that metals do not so attract lightning as to render conductors dangerous; and also the very best evidence that lightning-rods made of one-fourth and five-sixteenth inch iron are sufficiently large for conductors.

Iron wire of what is called number one size, is five-sixteenths, and number two size is one-fourth inch diameter, and costs in New York less than one cent per foot, and can be had of sufficient length for a rod in one entire piece. Some persons prefer rods of a larger size, but large rods can not be made in one piece of sufficient length without joints, and no rod should consist of more than one piece. To those who want larger rods we say take two, three, or more wires, and place them together, and in the aggregate a large rod is obtained at a very little cost, and all in one continuous conductor, and without joints. The great suspension bridge over Niagara River is made of iron wire of less than half of the size here described; and another across the same river, a little below the cataract, of wire, and is to bear the immense train of cars of the great Central Railroad.

A lightning-rod of number two iron wire can be made of one hundred and forty feet in length, at Messrs. Cooper and Hewitt's iron works, at Trenton, New Jersey, and that firm keeps on hand at their warehouse, No. 17 Burling Slip, New York, this kind of wire in one hundred pound rolls, at the price of ninety dollars per ton, and it is kept for sale in lesser quantities by Mr. Charles J. Shepard, No. 242 Water-st., New York. The rod needs no polishing or plating, or gold, or platina, or silver, or other metallic points. The end of the rod may be ground to a sharp point on a grindstone, or made sharp by filing. No *paint* should be put on the rod on any consideration, for in numerous rods covered with paint, I have found such failed to conduct the lightning.

Dwelling-houses should have a conductor upon every chimney, and if there be a cupola on the house that should be furnished with a conductor also. The conductor should extend one foot or more above the top of the chimney or cupola, and extend down to and into the ground to the depth of permanent moisture. If a well is near, terminate the rod in the water of the well, and at the bottom, so that in case of drought the end of the rod may be below the surface. A cesspool in the ground is a good termination, but the rod should reach the bottom of the pool. Wooden or cement cisterns are not a good termination. In passing from the chimney or cupola to the ground, the conductor should not come in contact or near contact with tin or copper gutters, or leaders, or with iron railings, but should be separate and distinct, and preserve in all its parts a continuous descent, and where a bend, or turn, or angle is necessary, let it be a gentle curve, and not a sharp angle. Dwellings with metal roofs require a rod or plate of metal on the chimney reaching only to the metal roof, and should discharge upon it in a broader surface than a point. The metal roof should be connected with the earth by a rod from its lowest edge. If there are two sides to the roof, each metal side should be connected with the earth by a rod. Where the lightning has the choice of two surfaces, it will invariably select the largest. A barn fifty feet in length should have three conductors, one on each end, reaching from one foot or more above the ridge-pole to and into the ground to the depth of permanent moisture, and one rod in the middle. The middle rod will of necessity be run over the roof, and to guard against contact with nails, a piece of wood of six inches in thickness should be laid under it in three or four places, to keep it above the shingles.

Meeting-houses with high steeples require a different conductor from other buildings. It is frequently the case that the spire is strengthened by an iron spindle run through the top of the spire, upon which a wind vane is affixed. A small rod on such a spire will be useless; the lightning will take the spindle and descend to the bell, if there is such a fixture, and if there is no conductor between the belfry and the ground, it may pass through the building. I would have two or more rods, with points, under the bell, to carry the lightning to and into the ground. The end or ends of the building should be each furnished with rods.

School-houses particularly require protection against lightning.

There is no objection to a great number of rods, provided each rod is in one piece, and extends to and into the earth.

All out-buildings should be protected in the same way as the barns.

Shade-trees near dwellings, or in pastures where cattle, sheep, or horses resort for shelter, should each have a rod, the cost of which will be but a few shillings. Shade-trees near buildings should have rods, for such appendages to dwellings afford no protection against lightning.

Insulation is an important matter, and the most difficult. I prefer glass insulators to any other, and these should have a bore so large that both the lightning and the water of the rain can pass through. I see many rods put up with insulators so small, that the water from a moderate rain running down the rod will more than fill the opening, and of course will unfit the rod for a lightning conductor, as lightning will not pass through the water. The best mode of fastening the insulators to the building is with a screw pointed iron holder, made like the letter P, six inches long, and this should have a good coat of paint on it. Brick or stone buildings require a different fastening, and probably a wood cleet nailed to the building, and a screw holder inserted in the cleet, would be the best mode.

Any person of ordinary capacity can put up a lightning-rod.

In reference to rods now in use, my remarks under the *fifth* head are sufficient.

I regard every man who constructs a lighining-rod as rendering a good service, and although I differ in opinion with all of them as to the mode of construction, still I have a kind feeling toward every individual following the business of putting up lightning conductors as a profession. I have never had any pecuniary interest whatever in the furnishing or putting up of lightning-conductors, and my only object in devoting so much time to the subject, is to benefit my fellow men: the accomplishing of which is the highest reward this earth can give.

Thunder-storms occur in all seasons of the year—summer, spring, autumn, and winter. Even snow-storms are occasionally accompanied by thunder and lightning.

In illustration of the frequency of thunder-storms, and the danger of neglecting protection, I will mention that during the month of July of the year 1854, we recorded thunder-storms at places within the field of our research, on twenty-seven of the thirty-one days of that month, during which thirty-nine persons were killed by lightning. The only days exempt from thunder-storms in July, 1854, were the first, third, twelfth, and fourteenth, and we may yet hear of thunder-storms on some or all of these days.

The wire rods are so cheap, and so easy of construction, that no building should be without these great safeguards. Almost every newspaper we receive in the summer contains accounts of loss of life or the burning of property by lightning, and it does seem to me surprisingly wonderful that people will continue to neglect protection with such testimony of the efficacy of lightning-conductors before them.

Many persons suffer greatly from fear during thunder-storms. should seek a solace in that declaration of Scripture, in which the writer of the Book of JOB says that the Almighty made a way for the lightning of the thunder. A calm and confiding state of mind during terrific thunder-storms is exceedingly requisite, and a humble trusting in that protection which the great Creator extends over all the work of his hands.

It will afford me gratification to be of service to any and every body, and any informntion that may be needed as to particular cases will be answered with all convenient dispatch, on application by letter by mail or otherwise.

I can not close this paper, long as it is, without adding something in relation to the best mode of resuscitating persons struck down by lightning. Cold water should be freely used, and the body first sprinkled with cold water, and then drenched with water, and this should be continued for hours, or until animation is restored, and if that fail, add salt to the water and continue the drenching. I have the record of a person being resuscitated after five hours drenching with cold water. E. MERIAM.

New York, November, 1856.

TABLE

Of the periods when the Hudson river Opened and Closed at Albany, as far as the same can be ascertained without a more particular examination of different records, including those contained in the Report of the Regents of the University, which at present I have not the leisure to make.

Winter.	River closed or obstructed by ice.	Rivers open or free of ice.	No. days closed.
1789-90	Feb. 8, 1790	March 27, 1790	52
1790-91	Dec. 8, 1790	" 17, 1791	99
1791-92	" 8, 1791	Probably early in March	
1792-93	" 12, 1792	March 6, 1793	84
1793-94	" 26, 1793	" 17, 1794	81
1794-95	Jan. 12, 1795	1st sl. arr. at N.Y. from Alb. Mar. 29	
1795-96	" 23, 1796		
1796-97	Nov. 28, 1796	N. riv. open 15th, above Po'keepsie	
1797-98	" 26, 1797		
1798-99	" 28, 1798		
1799-1800	Jan. 6, 1800	Feb. 28, 1800	
1800-01	" 8, 1801		
1801-02	Feb. 8, 1802	March 19, 1802	44
1802-03	Dec. 16, 1802		
1803-04	Jan. 12, 1804	April 6, 1804	84
1804-05	Dec. 18, 1804		
1805-06	Jan. 9, 1806	Feb. 20, 1806	42
1806-07	Dec. 11, 1806	April 8, 1807	121
1807-08	Jan. 4, 1808	March 10, 1808	65
1808-09	Dec. 9, 1809		
1809-10	Jan. 19, 1810		

Winter.	River closed or obstructed by ice.	Rivers open or free of ice.	No. days closed.
1810-11	Dec. 14, 1810	March 10, 1810	86
1811-12	" 20, 1811	" 16, 1812	86
1812-13	" 21, 1812	" 12, 1813	83
1813-14	" 22, 1813		
1814-15	" 10, 1814		
1815-16	" 2, 1815		
1816-17	" 16, 1816		
1817-18	" 7, 1817	" 25, 1818	108
1818-19	" 14, 1818	April 3, 1819	110
1819-20	" 13, 1819	March 25, 1820	102
1820-21	Nov. 13, 1820	" 15, 1821	123
1821-22	Dec. 13, 1821	" 15, 1822	92
1822-23	" 24, 1822	" 24, 1823	90
1823-24	" 16, 1823	" 3, 1824	78
1824-25	Jan. 5, 1825	" 6, 1825	60
1825-26	Dec. 13, 1825	Feb. 26, 1826	75
1826-27	" 24, 1826	March 20, 1827	86
1827-28	Nov. 25, 1827	Feb. 8, 1828	About 50
1828-29	Dec. 23, 1828	April 1, 1829	100
1829-30	Jan. 11, 1830	March 15, 1830	63
1830-31	Dec. 23, 1830	" 15, 1831	82
1831-32	" 5, 1831	" 25, 1832	111
1832-33	" 21, 1832	" 21, 1833	88
1833-34	" 13, 1833	Feb. 24, 1834	73
1834-35	" 15, 1834	March 25, 1835	100
1835-36	Nov. 30, 1835	April 4, 1836	125
1836-37	Dec. 7, 1836	March 28, 1837	111
1837-38	" 13, 1837	" 19, 1838	94
1838-39	Nov. 25, 1838	" 21, 1839	116
1839-40	Dec. 18, 1839	Feb. 21, 1840	65
1840-41	" 5, 1840	March 24, 1841	109
1841-42	" 19, 1841	Feb. 4, 1842	47
1842-43	Nov. 29, 1842	April 13, 1843	136
1843-44	Dec. 9, 1843	March 14, 1844	95
1844-45	" 11, 1844	Feb. 24, 1845	74
1845-46	" 4, 1845	March 15, 1846	100
1846-47	" 15, 1846	April 6, 1847	112
1847-48	" 24, 1847	March 22, 1848	89
1848-49	" 27, 1848	" 19, 1849	82
1849-50	" 25, 1849	" 9, 1850	73
1850-51	" 17, 1850	Feb. 25, 1851	69
1851-52	" 13, 1851	March 28, 1852	105
1852-53	" 22, 1852	" 21, 1853	91
1853-54	" 30, 1853	" 16, 1854	77
1854-55	" 18, 1854	" 20, 1855	92
1855-56	" 26, 1855	April 10, 1856	106

REMARKABLE INCIDENTS

CONNECTED WITH THE CHANGES OF TEMPERATURE.

1792. January 19.—The ice lodged in the East river for some time, and several people walked over it to and from New York to Brooklyn.

1796. December 24.—Ice from New York to Staten Island.

1797. January 7th.—In the afternoon of the 8th the ice closed up the passage between the Battery and Governor's Island, and 300 people were counted upon it, some skating and some going to the Island. It moved away the next tide. Before the 12th for several days the pilots would not take charge of any vessel going to sea on account of the ice.

" December 24.—A body of ice across the East river. Several people crossed on foot.

1800. December 22.—The river at Albany is open and quite free of ice.

" December 28.—A sloop came down from Albany.

1805. January 6.—A cake of ice lodged in the East river between this city and Brooklyn, on which many persons crossed the river.

" January 22-23.—Several persons crossed the Hudson from the State Prison, then in New York, to Hoboken.

1809. November 26.—The river is closed at Albany.

" December 15.—The river is open at Albany.

1810. March 10.—The steamboat makes her first trip to Albany.

1811. March 16.—The first sloop from Albany.

" March 23.—First trip of steamboat to Albany.

1817–18. NOTES.—This winter was long and intensely cold. On the 3d of March, 1818, the ice moved in a body downward for some distance, and there remained stationary. The river was not clear until March 25th.

1820. The river closed on the 13th Nov., opened on the 20th, and finally closed Dec. 1. This was one of the four winters during a century in which the Hudson, between Paulus Hook and New York, was crossed on the ice; the other three being 1740-41, 1765-66, and 1779-80.

1821. January 13.—A cake of ice lodged between Brooklyn and New York, and many persons crossed on it.

" January 25.—The coldest day in thirty years. Thermometer 7° below zero. Several persons crossed the North river from Paulus Hook to New York on the ice.

" January 26.—H. Laight and John Thomas Jones, with thousands, crossed to Paulus Hook on the ice. The harbor completely closed. Persons crossed at the Narrows from Long to Staten Island; also from Staten Island to the city.

1824. January 12.—The river was clear of ice, and remained so for several hours.

1827. The river opened and closed repeatedly during this winter. Dec. 21, it closed a second time.

1830-31. Opened in consequence of heavy rains, and closed on the 10th January, 1831.

1833. Opened again Jan. 3; closed again Jan. 11.

1842. February 6.—In consequence of heavy rains, the river opened in front of the city of Albany on the 8th of January, and can hardly be said to have closed again during the season. The ice, however, continued piled up some miles below, at and about Barren Island, near Schisodack Landing, and thus rendered the channel impassable. Cold weather followed about the middle of February, and again obstructed the navigation. A steamboat arrived again on the 1st of March, 1842.

1852. January 20.—Thousands of persons crossed on the ice between Brooklyn and New York in the morning.

1856. January 28.—People crossed from Brooklyn to Governor's Island and back on the ice.

" February 1.—A man crossed from foot of 20th-street to Weehawken, 2½ miles, on the ice.

" February 5.—Several persons crossed on the ice from Jersey City to New York, and also from Williamsburg to the Navy Yard across Wallabout bay.

" February 9.—Three men walked from Fulton-street, Brooklyn, to Burling Slip, New York, on the ice.

" February 19.—Persons crossed the East river on the ice.

" February 21.—Horses and wagons crossed to Randall's Island for a month past on the ice, and to-day persons crossed to Blackwell's Island on the ice.

In February, 1805, the winter was so severe, that hickory wood rose to eight dollars for a carman's load. On the 5th of that month the Legislature of the State passed an act, authorizing the Corporation of New York to tear down the forts at the Battery and Rhinelanders, and distribute the timber among the poor for fuel. The forts were demolished, and converted to fire wood.

THE WEATHER OF THE COMING WINTER.

The more I see of the changes and conditions of the weather, and of the variations of the seasons, the more I am satisfied that it is not in the power of any human being to foretell what the weather will be for even a single day ahead. In the autumn of 1855 many persons predicted a mild winter, and many indications to that effect were mentioned in the newspapers—they all proved fallacious. The safest plan is for every body to prepare for hard winters—if they prove mild they have so much more cause for increased thankfulness. If there is any matter in this little book, in relation to the weather, that I have not written, I deem it a duty to myself to ask the publishers to inform the readers that I am cognizant of nothing but what my name is affixed to, E. MERIAM.

NEW YORK CITY.

NEW YORK CITY deserves a more detailed account of its origin, rise, and progress, than our space allows; but, as the New York Almanac would be imperfect without some historical account, we shall attempt a brief sketch of the history of the great American metropolis. Without going so far back as did our learned historian, Diedrich Knickerbocker, in his famous "History of New York," we will state simply, that the Hudson river, and Manhattan or New York Island, were discovered by the intrepid English navigator, Henry Hudson, on the 3d of September, 1609. Hudson was in the employ of the East India Company, of Holland; and he had previously explored the North Sea, with the endeavor to discover a north-western passage. This attempt was fruitless; and Hudson returned to Holland. Henry Hudson, with twenty men, English and Dutch, sailed from Texel, in a vessel called the *Half Moon*. After doubling the Cape of Norway, he continued his voyage toward Nova Zembla, until, meeting with ice, he resolved to proceed south, toward Virginia. In doing this he discovered and explored New York bay and the Hudson river, which he penetrated with his ship as far as he thought prudent, and thence in a boat above Albany.

On the 7th of November, 1609, Hudson returned to Dartmouth, England, and from this place sent an account of his voyage and explorations to the Holland West India Company. The point of the island on which New York is built, he found in the possession of Indians. The Indians on the island proved unfriendly; those on the west or Jersey shore were friendly to the white men, but deadly enemies of the islanders. In 1610 the Company sent a second vessel to the Hudson river for the purpose of trading with the Indians. In 1612 the Dutch erected a fort on the southern extremity of Manhattan Island. This fort consisted of a redoubt, which overlooked the Hudson river. Thus the settlement of New Amsterdam, as it was called, was commenced. In 1614, an expedition from Virginia, under Captain Argal, took possession of New Amsterdam, which at that time consisted of only four houses outside the fort. Shortly afterward, an arrangement was made with the English, by which the Dutch remained in peaceable possession of the place for fifty years. The settlement gradually increased in numbers, and the settlers drove a thriving trade with the Indians, receiving furs in exchange for beads, trinkets, blankets, and hatchets. The sturdy Dutchmen would have led a happy life, had not their peace been broken by their frequent quarrels with the English colonies on the Connecticut river, and the Swedes on the Delaware. In 1623, the Dutch having purchased the southern extremity of the island, with the permission of the Indians erected a fort stronger than the former one; and most of the settlers resided within this work, until, the colony increasing, it was necessary to build some houses on the outside near it, which was the commencement of Pearl-street. This fort stood near the present site of Bowling-green.

The Dutch resolved to establish a permanent colony at New Amsterdam, and in 1629 commenced the "golden reign of Wouter Van Twiller," who was appointed governor that year, and who held office nine years. In 1635, he erected another and more substantial fort, which was burned with all its buildings in 1741, and was never rebuilt. In 1644 the Stadt House, or City Hall, was built, on the corner of Pearl-street and Coenties-slip. On the 11th of May, 1647, Peter Stuyvesant, the last of the Dutch governors, arrived, and held the office seventeen years, until the colony was captured in 1664. He was a soldier, and had lost a leg in the capture of Tobago. The first public school was established in the city in 1652. In 1655, Governor Stuyvesant captured Fort Cassimer, now Newcastle, on the Delaware river, from the Swedes. The Delaware river was then called the South river, whence, probably the Hudson received the appellation of North river in contra-distinction. In 1656 a market-house was built at the present corner of Pearl and Broad-streets. The city at that time had 120 houses and 1,000 inhabitants. In 1658 the first public wharf was built where Whitehall-street now is. The governor's house stood opposite, at the beginning of Water-street. The first map of the city was sent to Holland in 1660. In 1664 New Amsterdam was surrendered to the English, and was taken possession of by the Duke of York. It now took the name of New York. Nine years afterward, it was recaptured by the Dutch, who held possession of it, however, for only one year. In 1668 a carriage-road was ordered to be made to Harlem, none having existed before. In the same year a race-course was established at Hempstead. In 1673, the post-rider commenced making his trips between New York and Boston. In 1676 a law was passed to pave streets. In 1677 there were 384 houses and 12 streets in the city. In 1684 the first watch was appointed, consisting of 8 persons, at 12 pence each per night. In 1696 the city owned 40 ships, 62 sloops, and 60 boats. In the same year the Trinity church was built; it was afterward enlarged, and was burned in 1776. In 1696 it was ordered that a City Hall, valued at £8,000, should be built. In 1699, the old City Hall was sold to John Rodman, merchant, by "public outcry," for £920. The docks and slips in the city in 1701 were rented for £25 per annum. In 1711, Wall-street was paved from William (then Smith) street, to the English church. In 1711 a slave-market was established in Wall-street, near the East river. In 1712 a negro insurrection occurred; the negroes fired the city in several places, and murdered several of the citizens. Nineteen of them were executed.

In 1718 a ropewalk was established in the Commons. This ropewalk stood in Broadway, opposite the Park. A Presbyterian church was built in Wall-street in 1719. The New York *Gazette*, a weekly newspaper, was established in 1725. In 1731 the boundaries of the colonies were finally settled with Connecticut. The first stage-route to Philadelphia was established in 1732, and stages departed for Boston monthly, taking a fortnight for the journey. A law was passed in 1783 to preserve the fish in Fresh-water pond, now Canal and adjacent streets. In this year the House of Correction was instituted. In 1740 the New York Society Library was founded. A severe fire broke out in the fort in 1741, which destroyed the old Dutch church and the Secretary's office. The yellow fever prevailed to an alarming extent in this and the following year. The famous "Negro plot" occurred in the year 1741. The city at this time contained 12,000 inhabitants, 2,000 of whom were slaves. The people were aroused to the highest pitch of excitement at the report of the plot, which although it may have really existed, the rumor was exaggerated tenfold, the fears of the citizens being aroused by frequent fires and robberies. Some Irish Catholics were implicated with the negroes; 20 white persons and 154 negroes were imprisoned; of these, 13 negroes were burned at the stake, at the present junction of Pearl and Chatham-streets, then out of town; 20 were hung, one in chains, on an island in Fresh-water pond, where the Arsenal now stands; 78 were transported to foreign parts, and 50 were discharged. In 1745 the only coach in New York was owned by Lady Murray. A theatre was established in 1750. The Moravian church in Fulton-street was built in 1751, and in 1752 St. George's chapel was erected in Beekman-street. An Exchange was also erected by private subscription (the Corporation giving £100), on the west side of Broad-street, at the lower extremity. One thousand stand of arms was imported from England in 1755 by the Corporation, at an expense of £3,000; and the Corporation, for the purpose of discharging this "excessive and alarming debt," petitioned for a lottery. In 1761 Vesey-street was graded and paved; and lamps and lamp-posts were purchased. St. Paul's church was erected in 1765. In the same year a congress, composed of delegates from the colonies, met in New York. The Stamp Act created great excitement. The Brick church in Beekman-street was built in 1767. The first Methodist church in America was built in John-street in 1768. In 1769 the North Dutch church in William-street was erected. The New York Hospital was founded by subscription in 1769. The expense of lighting the city in 1770 was £760 per annum. An iron railing, which is still standing, was made around Bowling Green, at an expense of £800, in 1771. Warren-street was surveyed and regulated in 1771. The city on the 26th of August, 1776, fell into the hands of the British by the disastrous battle of Long Island. On the 21st of September following, a fire broke out, and before it ceased destroyed nearly one eighth part of the city, 493 houses having been consumed. Before the fire New York contained 30,000 inhabitants, and 4,200 houses. The winter in 1780 was so intensely cold that the ferry from New Jersey to Courtlandt-street was completely blocked up with ice, and loaded teams and artillery were passed over on this natural bridge. The Hudson river was measured at this place on the ice, and was found to be six thousand feet wide. The 25th of November, 1783, is the most memorable day in the history of our city. On that day the British evacuated the city after holding possession of it seven years, and General Washington, at the head of the American army, entered it. The British flag was still flying at the Battery when the Americans arrived, and it was hauled down with difficulty, for the British, on leaving, had greased the staff. Yet their malice was not gratified; the "meteor flag of England" came down, and soon in its place floated the banner of the free. During their occupancy of the city the British had constructed works across the island near Duane-street. They had destroyed all the churches, or converted them into barracks, riding-schools, or hospitals, except the English church, and the schools and colleges had been shut up. The city at that time did not extend further north than Murray-street. Mr. Cruger, treasurer of the Corporation, having joined the British army, left the country with them, and took away the books and accounts of the city. General Washington, La Fayette, John Jay, and Baron Steuben, at different dates received the freedom of the city. To Washington especially were the citizens of New York grateful for his services during the War of Independence. Aside from the freedom of the city, he received an address of congratulation and thanks, and all united in praising the soldier, general, statesman, and patriot. In 1785, the first congress after the war was organized in the City Hall, corner of Wall and Nassau-streets. In this year the Bank of New York went into operation. The adoption of the new constitution of the United States was celebrated by a grand federal procession. The 30th of April, 1789, was a gala-day in the city of New York; General Washington was inaugurated in the open gallery of the old City Hall, facing Broad-street; at the conclusion of the imposing ceremony, the immense gathering shouted with one voice, "Long live George Washington!" It seems almost a desecration to have removed the building in which this ceremony was performed; where Washington received the highest honors which a grateful people could bestow; but the present magnificent structure, the Custom-house, which occupies the site of old Federal Hall, is a fitting memorial of that occasion which will to all time be held in reverential remembrance by every American citizen.

In 1789, Broadway was opened through the fort to the Battery. Under the direction of Major L'Enfant, the City Hall was repaired, at a great expense for that time. Major L'Enfant received for this work the thanks of the Corporation, the freedom of the city, and an offer of ten acres of the public land, which last he politely declined. In 1795 the Park theater was erected. The yellow fever prevailed this year from July to November. Two thousand and eighty-six persons died of the epidemic. In 1799 the Manhattan Company received an unconditional charter for furnishing the city with pure and wholesome water. This company failed in its object. In this year the old Exchange in Broad-street was ordered to be demolished. On the 20th of December the intelligence of the death of Washington was received in the city. The bells of the city were muffled, and tolled from twelve to one for the next fourteen days; the citizens wore crape for six weeks, and a funeral oration was delivered at St. Paul's church by Governeur Morris. In 1801 the United States Navy Yard at the Wallabout bay, in Brooklyn, was established. In the same year the Fulton Ferry to Brooklyn was leased for $2,600 per annum. This year the Corporation seemed resolved to perform wonders; Broadway was ordered to be continued and opened through Thomas Randall's land, called the Sailors' Snug Harbor, to meet the Bowery; the surplus earth was to be carted into Fresh-water pond, and a City Hall was voted to be erected, the sum of $250,000 being devoted to the object. Contracts were entered into, and on the 20th of September, 1803, the foundation-stone was laid with due ceremony by the Mayor, Edward Livingstone. In 1807 the first successful attempt to navigate by steam was made by Robert Fulton and Edward Livingstone on the Hudson. On the 4th of July, 1811, the Corporation met for the first time in the new City Hall. The old City Hall in Wall-street was sold in 1812. On the 20th of June, 1812, the United States Government declared war against England. Robert Fulton leased the Fulton Ferry this year for $4,000 per annum, for the purpose of establishing new steamboats upon it. An experiment was made with gas lights in the Park in the month of August. In January, 1821, the bay and rivers were for the first time since 1780 closed with ice. In 1823 burials were prohibited south of Canal-street; and in the same year the old Potter's field was leveled and laid out into a public park, and called Washington square. The New York Gaslight Company was incorporated in 1823. On the 11th of May, 1825, gas pipes were laid in Broadway, on both sides, from Canal-street to the Battery. In 1853 there were 263 miles of gas pipe in the city. In 1825 the Merchants' Exchange in Wall-street was commenced. On the 26th of October, 1825, the completion of the Erie canal was announced by the firing of cannon along the entire line, from Buffalo and back, in 12 hours. On the 15th of November following, the first canal-boat arrived in New York, and was greeted with great manifestations of joy. The Merchants' Exchange was completed in 1827. In 1829 the American Institute in New York was instituted. The cholera raged in 1832 to a fearful extent. On the night of the 16th of December, 1835, the great fire occurred. The number of buildings consumed was 648, and the amount of property destroyed was estimated at $18,000,000. The South Dutch church and the Merchants' Exchange were consumed. But the burned district was rapidly covered with buildings more elegant and commodious. In 1837 the Croton Aqueduct was commenced, and on the 4th of July, 1842, the waters of the Croton wer let into the distributing reservoirs, and our citizens were furnished with an abundant supply of pure and wholesome water. In the years 1853-4, the World's Fair was held in the Crystal Palace, an elegant and spacious glass and iron building, erected for the purpose near the distributing Reservoir. A magnificent grove, called Jones's Woods, is now being laid out into a public ground, under the name of the Central Park, which, when completed, will form one of the most beautiful and commodious parks in any city of the Old World or the New. We here conclude this hasty glance at the annals of the city of New York, the metropolis of the United States, and the pride of the American nation.

GOVERNMENT OF THE UNITED STATES.

The 17th Presidential term of four years commenced on the 4th of March, 1853, and will expire on the 3d of March, 1857.

Franklin Pierce,	N. H.,	President,	Salary,	$25,000
Jesse Bright,	Ind.,	Vice-Pres., *pro tem.*,	"	8,000
Wm. L. Marcy,	N. Y.,	Secretary of State,	"	8,000
James Guthrie,	Ky.,	Secretary of the Treas.,	"	8,000
Jeff. Davis,	Miss.,	Secretary of War,	"	8,000
James C. Dobbin,	N. C.,	Secretary of the Navy,	"	8,000
Robt. M'Clelland,	Mich.,	Sec. of the Interior,	"	8,000
James Campbell,	Pa.,	Postmaster-General,	"	8,000
Caleb Cushing,	Mass.,	Attorney-General,	"	8,000

At the last Presidential election, held Nov. 4th, 1856, James Buchanan, of Pennsylvania, was elected President, and John C. Breckenridge, of Kentucky, was elected Vice-President, for the ensuing four years.

THE MINT.

The annual report of the Director of the Mint gives the following statement of the deposits and coinage at the various mints, for the year ending June 30, 1855:

Entire gold deposit,	$64,223,893
Entire silver deposit,	5,793,114
Gold coinage,	53,097,182
Silver "	5,219,150
Copper "	22,450
Gold pieces,	3,870,601
Silver "	22,848,700
Copper "	2,274,147

CITY GOVERNMENT, 1857

Fernando Wood, Mayor; office No. 6 City Hall.
Abram D. Russell, City Judge.
Richard Busteed, Counsel to Corporation.
David T. Valentine, Clerk of the Common Counsel; office No. 8 City Hall.

BOARD OF ALDERMEN.

WARD
1—William Wilson.
2—Hiram Corwin.
3—Morgan L. Harris.
4—Bartholomew Healy.
5—Henry R. Hoffmire.
6—John Clancy.
7—Thomas Adams.
8—William Tucker.
9—Solomon Banta.
10—John Griffith.
11—James R. Steers.

WARD
12—David S. Jackson.
13—Edward McConnell.
14—Peter Monaghan.
15—Orison Blunt.
16—Peter Fulmer.
17—William Coulter.
18—Jacob H. Valentine.
19—Thomas McSpeddon.
20—William McConkey.
21—James Owens.
22—William B. Drake.

BOARD OF COUNCILMEN.

DISTRICT
1—Henry Smith.
2—John Von Glahn.
3—Wm. H. Bulteel.
4—Thos. Monroe.
5—John Baulch.
6—James Reilly.
7—George P. Bickford.
8—James L. Waugh.
9—James Clark.
10—Robert Donnell.
11—Henry Hughes.
12—George McKinley.
13—M. Gilmarten.
14—George W. Warner.
15—Joseph S. Forbes.
16—Freeman Poole.
17—Jonas N. Philips.
18—Peter Crawford.
19—Joseph D. Martin.
20—Ledgard Avery.
21—John Kennard.
22—Alexander Hemphill.
23—Richard P. Clark.
24—Isaac O. Hunt.
25—Horatio Reed.

DISTRICT
26—John Van Tine.
27—Jesse S. Seckles.
28—H. W. Collyer.
29—David Hogg.
30—F. I. A. Boole.
31—B. F. Rhodes.
32—G. Cushman.
33—Charles Doty.
34—J. McConnell, Jr.
35—Ephraim Reed.
36—Hugh O'Brien.
37—Thomas Kelly.
38—George Kerr.
39—John H. Brady.
40—Robert W. Chapman.
41—Franklin J. Otterson.
42—George M. Pike.
43—Thomas Hearn.
44—Samuel Hopper.
45—C. Ackerman.
46—Wm. H. Mansfield.
47—J. M. Reynolds.
48—Nicholas Kissel.
49—John Walsh.
50—Bernland Reilly.

DIST.
51—Peter Lodewick.
52—F. W. Weigand.
53—Nathaniel Nesbitt.
54—C. Fitzgerald.
55—Charles H. Hasswell.

DIST.
56—Charles Addoms.
57—Homer Franklin.
58—Bryan McCahill.
59—Hen. A. Cargill.
60—Isaac A. Hopper.

HEADS OF DEPARTMENTS.

Police	Fernando Wood, Mayor; Bureau of Chief of Police, No. 1 City Hall.
Finance	Azariah C. Flagg, Comptroller; office, No. 5 Hall of Records.
Streets	Joseph S. Taylor, Street Commissioner; office, No. 4 Hall of Records.
Repairs & Supplies.	Nathan S. Selah, Commissioner Repairs and Supplies; office, basement City Hall, east wing.
Streets & Lamps .	Joseph E. Ebling, Commissioner Streets and Lamps; office, Essex Market.
Croton Aqueduct .	Myndert Van Schaick, President; office, Rotunda, Park.
"	Thos. R. De Forest, Commissioner; office, Rotunda, Park.
"	Alfred W. Craven, Chief Engineer; office, Rotunda, Park.
City Inspector . . .	George W. Morton; office, 6 Center-st.
Law	Richard Busteed, Counsel to Corporation.

OFFICE-HOLDERS.

A list of the principal officers whose salaries are paid out of the City Treasury, with their names, and by whom appointed:

Fernando Wood, Mayor, elected by the people . . .	$3,000
James M. Smith, Recorder, elected by the people . .	5,000
Abraham D. Russell, City Judge, elected by the people .	5,000
David T. Valentine, Clerk of the Common Council, appointed by the Board of Aldermen; do. of Supervisors, with allowances for extra work, appointed by the Board of Supervisors	2,350
Alexander Ming, Mayor's Clerk, appointed by the Mayor .	1,250
Wm. H. Stevens, First Marshal, " " .	1,250
Wm. M. Cook, Mayor's Secretary, " " .	1,250
Azariah C. Flagg, Comptroller, elected by the people . .	3,000
A. S. Cady, Clerk to Comptroller, appointed by Comptroller and Board of Aldermen	1,500
Henry H. Howard, Receiver of Taxes, appointed by Mayor and Board of Aldermen	3,000
John P. Hone, Deputy Receiver of Taxes, appointed by Mayor and Board of Aldermen	2,500

Anson V. Stout, City Camberlain, appointed by Mayor and Board of Aldermen	$500
Anson V. Stout, allowed for clerk hire	400
James Taylor, Keeper of the City Hall and Park, appointed by Comptroller and Board of Aldermen	1,000
Fifteen persons to clean City Hall and Courts, appointed by Keeper	7,142
Three Tax Commissioners, appointed by Board of Supervisors, each	2,500
Three Clerks, appointed by Board of Supervisors, each	1,000
Joseph S. Taylor, Street Commissioner, elected by the people	2,500
Edward Merritt, Inspector of Side-walks, appointed by Street Commissioner,	1,200
Rufus E. Crane, Superintendent of Wharves, appointed by Street Commissioner and Board of Aldermen	1,000
W. H. Hebbard, Superintendent of Lands and Places, appointed by Street Commissioner and Board of Aldermen	1,500
Nathaniel S. Selah, Commissioner of Repairs and Supplies, elected by the people	2,000
William Goodheart, Superintendent of Roads, appointed by Commissioner of Repairs and Supplies and Board of Aldermen	1,250
James Irving, Superintendent of Repairs to Public Buildings, appointed by do.	1,500
Henry C. Woolsey, Superintendent of Pavements, appointed by do.	1,500
Henry C. Woolsey allowed for horse and wagon by do.	250
Alfred Carson, Chief Engineer of Fire Department, appointed by Fire Department and Common Council	3,000
Twelve Fire Wardens, appointed by Fire Department and Common Council, each	600
Twenty-seven Bell-ringers, appointed by do., each	600
Jos. E. Ebling, Commissioner of Streets and Lamps, elected by the people	2,500
James Dowey, Superintendent of Lamps and Gas, appointed by Commissioner of Streets and Board of Aldermen	1,500
James Dowey allowed for horse and wagon, by do.	250
Morgan L. Mott, Superintendent of Streets, appointed by do.	1,500
S. T. Webster, Clerk, appointed by Superintendent of Streets and Board of Aldermen	1,000
Matthias Gooderson, Superintendent of Markets, appointed by Commissioner of Streets and Lamps and Board of Aldermen	1,000
Myndert Van Schaick, President of Croton Aqueduct Department, appointed by Mayor and Board of Aldermen	2,000
Theodore R. De Forest Commissioner, appointed by do.	2,000
Alfred W. Craven, Chief Engineer, appointed by do.	2,000
George W. Morton, City Inspector, elected by the people	2,500
Richard Busteed, Counsel to Corporation, elected by the people	3,500

Richard Busteed, by virtue of Act April 1st, 1854	$6,500
" allowed for clerk-hire	2,500
Corporation Attorney, appointed by Council and Board of Aldermen	2,000
Thomas J. Oakley, Chief-Justice of the Superior Court, elected by the people	5,
Edward Slosson, Justice of the Superior Court, elected by the people	5,000
Murray Hoffman, do., elected by do.	5,000
John Duer, do., elected by do.	5,000
Joseph S. Bosworth, do., elected by do.	5,000
Lewis B. Woodruff, do., elected by do.	5,000
George T. Maxwell, Clerk of Superior Court, appointed by the Justices of Superior Court	2,500
D. P. Ingraham, Judge of the Court of Common Pleas, elected by the people	5,000
C. P. Daly, do., elected by do.	5,000
John R. Brady, do., elected by do.	5,000
B. H. Jarvis, Clerk of Court of Common Pleas.	
A. Thompson, Justice of Marine Court, elected by the people	3,000
A. K. Maynard, " " "	3,000
Florence McCarthy, " " "	3,000
James Green, Judge of Dist. Court, " "	2,000
Bart. O'Connor, " " "	2,000
Wm. B. Meede, " " "	2,000
Wm. H. Van Coits " " "	2,000
John Anderson, Jr., " " "	2,000
Anson Willis, " " "	2,000
Thos. Pearson, " " "	2,000
William Mitchell, Justice of the Supreme Court, allowed $2,500 by the State, and $8 per day for services out of the county, elected by the people	1,500
James J. Roosevelt, do., elected by do.	1,500
Henry E. Davies, do., elected by do.	1,500
Thomas W. Clerke, do., elected by do.	1,500
W. H. Peabody, do., elected by do.	1,500
Peter B. Sweeney, Public Administrator, appointed by Corporation and Board of Aldermen	1,250
Wm. H. Faulkner, Regulator of Clocks, appointed by Commissioner of Streets and Places and Board of Aldermen	800
George W. Matsell, Chief of Police, appointed by Police Commissioners	2,500
W. McKellar, Clerk of do., appointed by Chief of Police and Police Commissioners	1,500
Michael Halpin, Captain of Police, First Ward, appointed by Police Court	1,000
James Leonard, do., Second do., appointed by do.	1,000
James A. Hopkins, do., Third do., appointed by Police Commissioners	1,000
Murray Dichett, do., Fourth do., appointed by do.	1,000

Daniel Carpenter, Captain of Police, Fifth Ward, appointed by Police Commissioners	$1,000
Joseph Dowling, do., Sixth do., appointed by do. . .	1,000
Edward Letts, do., Seventh do., appointed by do. . .	1,000
Charles S. Turnbull, do., Eighth do., appointed by do. .	1,000
Abraham Ackerman, do., Ninth do., appointed by do. .	1,000
George W. Morris, do., Tenth do., appointed by do. . .	1,000
Peter Squires, do., Eleventh do., appointed by do. . .	1,000
Galen T. Porter, do., Twelfth do., appointed by do. . .	1,000
John F. Russell, do., Thirteenth do., appointed by do. .	1,000
David Kissner, do., Fourteenth do., appointed by do. . .	1,000
George W. Dillis, do., Fifteenth do., appointed by do. .	1,000
John D. McKee, do., Sixteenth do., appointed by do. . .	1,000
Jedediah W. Hart, do., Seventeenth do., appointed by do. .	1,000
Harris Wines, do., Eighteenth do., appointed by do. . .	1,000
Francis J. Twomey, do., Nineteenth do., appointed by do. .	1,000
William Joyce, do., Twentieth do., appointed by do. .	1,000
Francis C. Speight, do., Twenty-first do., appointed by do.	1,000
Danial Wilter, do., Twenty-second do., appointed by do.	1,000
Four Interpreters, appointed by the Police Court, each .	600
A. O. Hall, District Attorney, elected by the people . .	5,000
John Sedgwick, Assistant Attorney, appointed by District Attorney	2,500
Richard B. Connelly, County Clerk, elected by the people .	3,000
Alexander W. Bradford, Surrogate, " " .	5,000
George T. Maxwell, Clerk of Board of Education . .	2,000

OFFICIAL DIRECTORY.

Chief of Police . . .	Office,	Basement	No. 1	City Hall.
Sheriff's Jury . . .	"	1st floor	4	"
Clerk of Board of Councilmen	"	"	5	"
Mayor	"	"	6	"
Health Commissioner . .	"	"	6	"
Resident Physician . .	"	"	6	"
Inspector of Vessels . .	"	"	6	"
Fire Marshal	"	"	6	"
First Marshal . . .	"	"	6	"
Superintendent of Carts .	"	"	6	"
Commissioner of Jurors .	"	"	7	"
Clerk of Common Council .	"	"	8	"
Keeper of City Hall . .	"	"	9	"
County Clerk	"	"	10	"
Sheriff	"	"	11	"
Corporation Library Room .	"	"	12	"
Naturalization Office . .	"	"	12½	"
Governor's Room . . .	"	2d floor	14	"
Board of Aldermen . .	"	"	15	"
Judge's Chambers Common Pleas	"	2d floor,	No. 17	City Hall

Superior Court, part 1st, 2d floor New Court House.
" " 2d " " "

Clerk of Superior Court, office,	No. 18	City Hall.
Court of Common Pleas, part 1st .	19	"
" " " 2d .	20	"
Board of Councilmen	19 & 21	"
Commissioner of Repairs & Supplies .	2 & 3	"

Collector of Assessments, North-west corner of basement City Hall.
Clerk of Court of Common Pleas, No. 13 City Hall.

The following are located in the New Court House, corner of Center and Chambers-sts:

Clerk of Marine Court, 3d floor, No.	19.
Marine Court . . "	15.
Receiver of Taxes, basement	2.
Tax Commissioners, "	1.

District Attorney, 2d floor 3d.
Recorder.
Law Library.
Supreme Court, Special and General Term, Chambers.
Circuit Court.
Court of Oyer and Terminer.
United States Court.

The following are in the Rotunda (Park).

Governor of Almshouse, .	office, 1st floor.
Croton Aqueduct Department,	" 2d "
Water Surveyor, . . .	" " "

The following in the Hall of Records (Park).

Register, office, 1st floor, No. 1 and 2.
Surrogate, office, 1st floor, No. 3.
Street Commissioner, office, 2d floor, No. 4.
Comptroller, office, 2d floor, No. 5.
Collector of City Revenue, office, 2d floor, No. 5.

Board of Fire Commissioners, office, Fireman's Hall.
Superintendent of Buildings.
" Streets, office, rear of Essex Market.
" Lamps and Gas, office, Essex Market.
" Pavements, office, Commissioner of Repairs and Supplies.
" Wharves, office, No. 4 Hall of Records.
Commissioner of Streets and Lamps, office, Essex Market.
Corporation Counsel, office, No. 51 Chambers-st.
Public Administrator, office, " "
Corporation Attorney, office, No. 25 "
United States Marshal, office, College Place.
Coroner's office, Chambers-st.

JUSTICES' COURTS.

First District, 35 Warren-st.
Second " Fourth, Sixth, and Fourteenth Boards, between Center and Broadway.
Third " Jefferson Market.
Fourth " cor. Fifth-st. and First Av.
Fifth " cor. Grand and Clinton-sts.
Sixth " Broadway, Junction of Thirty-fourth-st.
Seventh " cor. Eighty-sixth-st. and Fourth Av.
Commissioners of Emigration, 81 Anthony-st.
United States District Attorney, cor. Murray-st. and College Place.
United States Commissioner, " " "

BOARD OF EDUCATION FOR 1857.

WARD
1—Samuel Auld,
J. W. Brown.
2—H. L. Stewart,
John Hooper.
4—V. N. Lecompte,
W. H. Avery.
4—Eugene Shine,
John Ware.
5—William B. Eager,
J. M. Tuthill.
6—William Sinclair,
Walter Roche.
7—William B. Tweed,
A. Denike.
8—John R. Lydec,
E. Bootman.
9—H. Williamson,
Albert Smith.
10—George H. Clarke,
Daniel Slote.
11—Aaron B. Rollins,
George White.

WARD
12—J. Mackean,
A. V. Williams.
13—J. L. Scofield,
S. Brooker.
14—A. H. Green,
Thomas Boese.
15—E. C. Benedict,
R. Burlew,
16—William J. Haskett,
L. W. Smith.
17—R. C. Fellows,
J. F. Henry.
18—William H. Neilson,
S. Baldwin.
19—John C. Hull,
R. S. Gray.
20—William Monteith,
N. J. Waterbury.
21—John Davenport,
L. Barney.
22—Peter Masterson,
J. Edwards.

POPULATION OF THE GLOBE.

Africa, variously estimated from 60,000,000 to	100,000,000
America,	58,252,882
Asia, including Islands,	626,000,000
Australia and Australian group of Islands,	1,445,000
Europe,	263,517,521
Polynesia (a mere estimate, as there are few or no data),	1,500,000

DESCRIPTION OF THE CITY.

New York city is the principal city of the State of New York, and is the largest city in the United States. In wealth, commerce, and population, New York deserves to be styled the London of America. The City Hall is in latitude 40° 42′ 40″ N.; and in longtitude, 74° 1′ 8″ W. from Greenwich, and 3° 0′ 16″ E. from Washington. It is 210 miles south-west of Boston, 145 miles south of Albany, 225 miles north-east of Washington, 670 miles north-east of Charleston, 1370 miles north-east of New Orleans, and 372 miles south of Montreal.

The closely-built portion of New York is situated on the southern extremity of New York or Manhattan Island, at the junction of the Hudson, or North river, with the East river. which connects the harbor of New York with Long Island Sound. The island contains about 14,500 acres of ground, and extends from the confluence of the two rivers, 13¼ miles, to Kingsbridge, and has an average breadth of one and three-fifth miles. The greatest breadth is on the line of Eighty-eighth-street, about two miles and a half. Three bridges, Harlem bridge, Macomb's bridge, and King's bridge, connect the island with the mainland on the north.

PARKS, ETC., IN NEW YORK.

NAME AND LOCALITY.	AREAS.				
	Sq. feet.	a.	r.	p.	f.
Battery.—Extreme southern end of the Island	463,609	10	2	22	239
Bowling Green.—Broadway, Whitehall, and State-st.	24,483	0	2	9	253
The Park.—Broadway, Chambers, Center-sts. and Park Row	472,080	10	3	14	0
Duane Park.—Duane, Hudson, and Greenwich-sts.	5,783	0	0	21	66
Five Points Park.—Park, Orange, and Little Water-sts.	6,727	0	0	24	193
Hudson Square,—Hudson, Laight, Varick, and Beach-sts	177,962	4	0	13	183
Washington Square.—University Place, Waverly Place, Macdougal, and Fourth-sts.	424,684	9	2	39	246
Tomkins Square.—Av. A., Seventh-st., Av. B., and Tenth-st.	457,764	10	2	1	112
Abingdon Square.—Hudson-st., Troy-st., and Eighth Av.	9,021	0	0	33	36
Union Place. — Broadway, Fourteenth-st., Fourth Av., and Seventeenth-st.	151,080	3	1	34	253
Stuyvesant Square.—On Second Av., between Fifteenth and Seventeenth-sts.	171,190	3	3	28	217
Gramercy Park.—Between Twentieth and Twenty-first-sts., Lexington Av. and Irving Place.	78,600	1	2	30	92

NAME AND LOCALITY.	AREAS.				
	Sq. feet.	a.	r.	p.	f.
Madison Square.—Fifth Av., Twenty-sixth-st., Madison Avenue, and Twenty-third-st	299,250	6	8	19	47
Bloomingdale Square.—Fifty-ninth-st., Ninth Av., Fifty-third-st., and Eighth Av.	786,666	18	0	9	186
Hamilton Square.—Sixty-sixth-st., Fourth Av. Sixty-ninth-st., and Third Av.	649,890	15	0	0	000
Observatory Place.—Fifth Av., Ninety-fourth-st., Fourth Av., and Eighty-ninth-st	1,122,375	25	3	2	160
Manhattan Square. — Seventy-seventh-st., Eighth Av., Eighty-seventh-st., and Ninth Av.	830,000	19	0	8	183
Mount Morris.—Between 120th and 124th sts. on the Fifth Av	878,665	20	0	27	114
Central Park.—Between Fifty-ninth and 106th sts., Fifth and Eighth Avs		730	0	0	

DAY-STATIONS OF POLICEMEN.

FIRST WARD.

No. 1—Merchants' Exchange, in Wall-st.; 2—Post Office, in Nassau-st.; 3—South Ferry, foot of Whitehall-st.

SECOND WARD.

No. 1—Broadway, corner of Ann-st,; 2—Fulton Ferry.

THIRD WARD.

No. 1—Barclay-st. Ferry; 2—Courtlandt-st; 3—Washington Market; 4—Hudson River Railroad Dépôt; 5—Broadway, corner of Courtlandt-st.; 6—West-st.

FOURTH WARD.

No. 1—Peck Slip Ferry; 2—Catharine Ferry.

FIFTH WARD.

No. 1—Corner of Broadway and Canal-st.; 2—Corner of Hoboken and West-sts.

SIXTH WARD.

No. 1—Park; 2—Corner of Bowery and Bayard-st.; 3—At the Five Points (two policemen); 4—On the east side of Broadway, from Park to Canal-st.

SEVENTH WARD.

No. 1—Corner of East Broadway and Catharine-st.; 2—C of Jackson and Monroe-sts.

EIGHTH WARD.

No. 1—Corner of West and Spring sts.; 2—Corner of Laurens and Grand-sts.; 3—Corner of Charlton and Varick-sts.

NINTH WARD.

No. 1—Hoboken Ferry, foot of Christopher-st.; 2—Foot of Thirteenth-st.

TENTH WARD.

No. 1—Corner of Grand-st. and Bowery; 2—Corner of Forsyth and Division-sts.

ELEVENTH WARD.

No. 1—Dry Dock, at the head of Av. D.; 2—At the Ferry, foot of Houston-st.; 3—At the corner of Columbia and Houston-sts.

TWELFTH WARD.

No Day Stations.

THIRTEENTH WARD.

No. 1—Corner of Grand and Clinton-sts.; 2—Corner of Grand and East-sts.

FOURTEENTH WARD.

No. 1—Corner of Bowery and Broome-st.; 2—Corner of Walker and Mulberry-sts.

FIFTEENTH WARD.

No. 1—University Place, east side, between Tenth and Eleventh sts.; 2—Washington Parade Ground.

SIXTEENTH WARD.

No. 1—Corner of Seventeenth-st. and Tenth Av.; 2—Corner of Twenty-fourth-st. and Seventh Av.

SEVENTEENTH WARD.

No. 1—Av. A. and First-st.; 2—Third Av. and Tenth-st.

EIGHTEENTH WARD.

No. 1—Union Park; 2—Stuyvesant Square; 3—Madison Square.

NINETEENTH WARD.

No. 1—Sixty-first-st. and Third Av.; 2—Forty-second-st. and Third Av.; 3—Forty-third-st. and Tenth Av.; 4—Bloomingdale in Broadway.

TWENTIETH WARD.

No. 1—Corner of Thirty-second-st. and Sixth Av.; 2—Corner of Thirtieth-st. and Seventh Av.; 3—Corner of Twenty-ninth-st. and Av.; 4—Corner of Twenty-seventh-st. and Tenth Av.; 5—

Corner of Thirty-eighth-st. and Ninth Av.; 6—Corner of Thirty-sixth-st. and Eighth Av.; 7—Corner of Thirty-fifth-st. and Seventh Av.; 8—Corner of Thirty-first-st. and Eleventh Av.; 9—Corner of Thirty-ninth-st. and Broadway; 10—Corner of Thirty-ninth-st. and Eleventh Av.; 11—Corner of Thirtieth-st. and Eleventh Av.

TWENTY-FIRST WARD.

No Day Stations.

TWENTY-SECOND WARD.

No Day Stations.

POLICE STATION-HOUSES

PATROL DISTRICT. STATION-HOUSE, WHERE LOCATED.

No. 1.—Franklin Market.
2.—49 Beekman-st.
3.—35 Barclay-st.
4.—9 Oak-st.
5.—49 Leonard-st.
6.—No. 9 Franklin st.
7.—Gouverneur Slip.
8.—Cor. Wooster-st. and Prince.
9.—In Charles between Hudson and Bleeker sts.
10.—Essex Market.
11.—663 Fourth-st.
12.—126th-st., between Third and Fourth Avs.
13.—Cor. Attorney and Delancey-sts.
14.—Center Market.
15.—220 Mercer-st.
16.—Twentieth-st., between Seventh and Eighth Avs.
17,—48 Sixth-st.
18.—319 Second Av.
19.—Fifty-ninth-st., near Third Av.
20.—Thirty-fifth-st., between Eighth and Ninth Avs.
21.—Twenty-ninth-st., between Fourth and Fifth Avs.
22.—Eighth Av., near Forty-eighth-st.

BELL-TOWERS IN NEW YORK CITY.

City Hall.
Essex Market.
Jefferson Market.
Union Market.
Thirty-third-st.
Macdougal-st.
100th-st.
Marion-st.
Twenty-second-st.

FERRIES.

NEW YORK AND BROOKLYN.

CATHARINE FERRY—Starts from Catharine Slip, running from 5 A. M. to 9 P. M., every 10 minutes; from 9 to 12 P. M., every 20 minutes.

FULTON FERRY—Starts from foot of Fulton-st., running from 7 A. M. to 7 P. M., all the time; from 7 to 9 P. M., every 7 minutes; from 9 to 12 P. M., every 10 minutes; from 12 to 3 A. M., every 15 minutes; from 3 to 7 A. M., every 20 minutes.

GOUVERNEUR FERRY—Starts from foot of Gouverneur-st., running from 5 A. M. to 8 P. M., every 10 minutes; from 8 P. M. to 11 P. M., every 20 minutes.

HAMILTON AVENUE FERRY—Starts from foot of Whitehall-st., running from 4¾ A. M. to 6 A. M., every half hour; from 6 A. M. to 7 P. M., about every 12 minutes; from 7 P. M. to 9 P. M., every 15 minutes; from 9 to 12 P. M., every half hour.

ROOSEVELT FERRY—Starts from foot of Roosevelt-st., running from 5 to 6 A. M., every half hour; from 6 A. M. to 7 P. M., every 12 minutes; from 7 to 9 P. M., every 15 minutes; from 9 to 11 P. M., every half hour.

SOUTH FERRY—Starts from foot of Whitehall-st., running from 7 A. M. to 7 P. M., every 8 minutes; from 7 to 11 P. M., every 10 minutes; from 11 P. M. to 5 A. M., every half hour; from 5 to 7 A. M., every 15 minutes.

WALL-STREET FERRY—Starts from foot of Wall-st., running from 5 A. M. to 12 P. M., every 10 minutes.

NEW YORK, BULL'S FERRY, AND FORT LEE.

Boat leaves foot of Spring-st. three times daily.

NEW YORK AND CALVARY CEMETERY.

Boat leaves foot of East Twenty-third-st., hourly.

NEW YORK AND ELIZABETHPORT.

Boat leaves Pier No. 2, North River, every afternoon.

NEW YORK AND GREENPOINT.

Boat leaves foot of Tenth-st., running from 4 A. M. to 1 A. M., every 20 minutes.

NEW YORK AND HOBOKEN.

BARCLAY-STREET FERRY—Leaves foot of Barclay-st., running from 6 A. M. to 7½ P. M., every 15 minutes; from 7½ to 12 P. M., every half hour; from 12 P. M. to 4 A. M., every hour; from 4 to 6 A. M., every half hour.

CANAL-STREET FERRY—Leaves foot of Canal-st., running from 5½ A. M. to 9 P. M., every half hour.

CHRISTOPHER-STREET FERRY—Starts from foot of Christopher-st., running from 6½ A. M. to 7½ P. M., every half hour.

NEW YORK AND JERSEY CITY.

COURTLANDT-STREET FERRY—Starts from foot of Courtlandt-st., running from 5 A. M. to 6½ P. M., every 7½ minutes; from 6½ to 10½ P. M., every 15 minutes; from 10½ P. M. to 5 A. M., every ½ hour.

NEW YORK, NEWTOWN, AND PENNY BRIDGE.

Boat leaves foot of East Twenty-third-st., running half hourly, from 9 A. M. to 6 P. M.

NEW YORK AND PAVONIA AVENUE.

Boat leaves foot of Chambers-st.

NEW YORK AND STATEN ISLAND.

PORT RICHMOND FERRY—Boat leaves foot of Whitehall-st., touching at New Brighton, Sailor's Snug Harbor, Factoryville, Bergen Point, and Port Richmond, every hour and a half.

QUARANTINE FERRY—Boat leaves foot of Whitehall-st., landing at Quarantine, Stapleton, and Vanderbilt's Landing, every hour, from 6 A. M. to 7 P. M.

NEW YORK AND WILLIAMSBURG.

GRAND-STREET FERRY—Leaves foot of Grand-st., running from 4 A. M. to 10 P. M., every 12 minutes; from 10 to 12 P. M., every 20 minutes; from 12 to 4 A. M., every half hour.

HOUSTON-STREET FERRY—Starts from foot of Houston-st., running from 6 A. M. to 10 P. M., every 10 minutes; from 10 to 12 P. M., every 20 minutes; and from 12 to 6 A. M., every half hour.

PECK SLIP FERRY—Leaves Peck Slip, running from 6 A. M. to 7 P. M., every 8 minutes; from 7 P. M. to 6 A. M., every 20 minutes.

TELEGRAPH COMPANIES.

Boston and New York Printing (House's), 21 Wall-st., to New Haven, Hartford, Springfield, Providence. Boston, and all towns east.

City, connecting Union Place with the Astor House and Wall-st., and uniting with the great Eastern, Southern, and Western Lines at the office in Wall-st. Offices, 869 Broadway, 6 Chatham Square, 21 Wall-st., and 422½ Broadway.

Merchants' Marine, 114 Merchants' Exchange. A. A. Leggett, Superintendent.

National, 23 Wall-st., to Pittsburg, Cincinnati, Louisville, St. Louis, Memphis, New Orleans, and all offices west and south-west. J. D. Reid, Superintendent.

New York, Newfoundland, and London; office 11 Cliff-st. Peter Cooper, President; Moses Taylor, Treasurer.

New York and Erie Railroad, foot of Duane-st., to all places on the line of the road and its branches. Also Montrose, Honesdale, Carbondale, Hyde Park, Scranton, Pittstown, and Pompton. L. G. Tillotson, Superintendent.

New York and Sandy Hook, 114 Merchants' Exchange. A. A. Leggett, Superintendent.

New York and Washington (House's), 21 Wall-st., to Paterson, Trenton, Philadelphia, Baltimore, Washington, Pittsburg, Richmond, Cincinnati, Detroit, Louisville, St. Louis, Chicago, Savannah, Memphis, New Orleans, etc. Francis Morris, President.

New York, Albany, and Buffalo; offices 2½ Wall-st., St. Nicholas and Metropolitan Hotels, and Corn Exchange, to Croton Falls, Poughkeepsie, Hudson, Troy, Albany, Schenectady, Amsterdam, Canajoharie, Little Falls, Utica, Rome, Syracuse, Newburg, Ogdensburg, Fulton, Watertown, Rondout, Kingston, Kinderhook, Fonda, Oneida, Palmyra, Auburn, Geneva, Canandaigua, Rochester, Batavia, Buffalo, connecting with Canada viâ Troy and Buffalo, with Oswego viâ Syracuse, and with the west and south-west viâ Buffalo. George Curtis, President.

New York and New England Union, 23 Wall-st., connects with Boston, Providence, Worcester, Springfield, Hartford, New Haven, Bridgeport, Stamford, Norwalk, Meriden, Middletown, Norwich, New London, New Bedford, Taunton, Fall River, Newport, Woonsocket, Pawtucket, Canada, and the other British Provinces. H. M. Schieffelin, President.

New York State Printing (House's); office 2½ Wall-st., to Albany, Buffalo, Cleveland, Cincinnati, St. Louis, intermediate places, and Canada.

New York and Washington Magnetic (Morse's), 5 Hanover Place, and 181 Broadway, to Jersey City, New Brunswick, Princeton, Trenton, Philadelphia, Wilmington, Havre de Grace, Baltimore, Washington, etc. W. P. Westervelt, Superintendent.

Transatlantic, office 111 Broadway, H. B. Tebbetts, Agent.

Washington and New Orleans, Hanover-st. cor. Exchange Place, to Alexandria, Fredericsburg, Richmond, Petersburg, Norfolk, Wilmington, Raleigh, Fayetteville, Cherau, Camden, Columbia, Charleston, Augusta, Savannah, Macon, Griffin, Atlanta, Columbus, Montgomery, Cahawba, Mobile, and New Orleans. Amos Kendall, President.

INSTITUTIONS OF THE CITY OF NEW YORK.

Columbia College, Park Place, Charles King, LL.D., President.

University of the City of New York, University Place, John C. Green, President.

New York Hospital, Broadway, between Duane and Worth-sts., Geo. Newbold, President.

Ladies' Association of the Roman Catholic Orphan Asylum, Prince-st., Mrs. Bareau, Directress.

Bloomingdale Asylum, Bloomingdale Road.

College of Physicians and Surgeons, Twenty-third-st. & Fourth Av., Alexander H. Stevens, M.D., LL.D., President.

Institution for the Deaf and Dumb, Fiftieth-st., near Fourth Av., Harvey L. Peet, LL.D., President.

Association for the Relief of Respectable Aged and Indigent Females, Twentieth-st., between Second and Third Avs., Mrs. Innes, 1st Directress.

Institution for the Blind, Ninth Av. between Thirty-third & Thirty-fourth-sts., Isaac Wood, M.D., President.

Prison Association of New York, Center-st. near Chambers-st., Hon. Rennselaer N. Havens, President.

Society for the Reformation of Juvenile Delinquents, foot of Twenty-Third-st., East River, Robert Kelly, President.

Roman Catholic Orphan Asylum, Prince-st., Most Rev. John Hughes, President.

Roman Catholic Half Orphan Asylum, Eleventh-st. near Seventh-Av., Most Rev. John Hughes, President.

New York Asylum for Lying-in Women, 85 Marion-st., Mrs. J. W. Schmidt, Directress.

Association for the Benefit of Colored Orphans, Fifth Av. bet. Forty-third and Forty-fourth-sts, Hetty King, 1st Directress.

Colored Home, Sixty-fifth-st. near Second Av., Mrs. M. A. Wells, 1st Directress.

American Female Guardian Society, East Thirtieth-st. bet. Fourth and Madison Avs., Mrs. C. W. Hawkins, 1st Directress.

St. Luke's Home for Indigent Christian Females, 453 Hudson-st., Rt. Rev. Horatio Potter, D.D., President.

New York Woman's Hospital, 83 Madison Av.

Orphan Asylum, Seventy-first-st. and Bloomingdale Road, Mrs. Joanna Bethune, 1st Directress.

Protestant Half Orphan Asylum, Sixth Av. bet. Tenth and Eleventh-sts., Mrs. Wm. A. Tomlinson, 1st Directress.

Magdalen Female Benevolent Asylum, Eighty-eighth and Eighty-ninth-sts. bet. Fourth and Fifth Avs., Mrs. Mary Hastings, 1st Directress.

House and School of Industry, 100 West Sixteenth-st., Mrs. W. H. Le Roy, President.

Seamen's Fund and Retreat, Staten Island, Lambert Suydam, President.

New York Juvenile Asylum, office 23 West Thirteenth-st., Apollos R. Wetmore, President.

Eye and Ear Infirmary, Mercer-st. between Spring and Prince-sts., Rufus L. Lord, President.

General Society of Mechanics and Tradesmen, Crosby-st., Thomas Jeremiah, President.

Ophthalmic Hospital, Stuyvesant-st., Hon. Caleb S. Woodhull, President.

New York Dispensary, N. W. cor. Center and White-sts., George T. Trimble, President.

Demilt Dispensary, Second Av. between Twenty-first and Twenty-second-sts., Frederic E. Mather, President.

Northern Dispensary, cor. Waverley Place and Factory-st., Jacob Harson, President.

Eastern Dispensary, Ludlow-st., Wm. P. Cooledge, President.

North-western Dispensary, 511 Eighth Av., Robert Ray, President.

THE FREE ACADEMY,

Twenty-third-st, corner of Lexington Av., was established in 1848 by the Board of Education of the city of New York, in pursuance of an act passed May 7, 1847, for the purpose of providing higher education for such pupils of the Common Schools as may wish to avail themselves thereof. The Free Academy is under the general superintendence of the Board of Education; but it is specially under the supervision of an Executive Committee for its care, government, and management, appointed by the Board. All its expenses for instruction, apparatus, library, cabinet collections, books and stationery, are paid out of the public treasury.

The students are admitted in annual classes, and the full course of study embraces five years.

The Board of Education is authorized by law to confer the usual Collegiate degrees on the recommendation of the faculty.

Graduates may become "Resident Graduates," and continue their studies at option. The academical studies during Term time, continue daily (except Saturday and Sunday) from a quarter before 9 o'clock A.M. to 3 o'clock P.M.

THE COOPER INSTITUTE

Is a noble building now in process of erection by Mr. Peter Cooper of New York, to be devoted to the "moral, intellectual, and physical improvement of his countrymen." The building covers an entire block, having a front on Third Av. of 195 feet, on Fourth Av. 155, on Eighth-st. 143, and on Seventh-st. 86. It is in the immediate vicinity of the new "Bible House," the "Astor Library," the "Mercantile Library," and the rooms of various literary and scientific societies. In the basement is a large lecture-room, 125 feet long by 82 wide and 21 high; and this, and also the first and second stories, which are arranged for stores and offices, are to be rented, so as to produce a revenue to meet the annual expenses of the "Institute." The "Institute" proper—or the "Union"—commences with the third story, in which is an "exhibition-room" 20 feet high and 125 by 82, lighted from above by a dome. The fourth story may be considered as a part of the third, being a continuation of galleries with alcoves, for painting and sculpture. In the fifth story will be two large lecture-rooms, and the library, consisting of five rooms, which connect with each other and with the lecture-rooms. There are also rooms for experiments, for instruments, and for the use of artists. The cost of the building is about $300,000, and the annual income from the rented parts will be from $25,000 to $30,000. The whole is to be given to a Board of Directors for the benefit of the public; the course of lectures, the library, and the reading-rooms all to be free. In the munificence both of the gift and the endowment, and in the importance of the result intended to be secured, the "COOPER INSTITUTE" will be a monument to its noble-hearted founder more enduring than the pyramids.

THE NEW YORK HOSPITAL,

One of the noblest charities in the city, was established in 1771, and received its first charter from the Earl of Dunmore, then governor of the province. It was incorporated under the title of the "Society of the Hospital in the city of New York in America." Twenty-six governors were appointed to manage its affairs. In consequence of the liberal assistance which was instantly tendered to the Society, it was able in 1773 to commence the erection of a suitable edifice; but on the 28th of February, 1775, when it was nearly completed, the building was accidentally destroyed by fire. In less than a month the Society received further contributions from the Legislature, and commenced to rebuild the edifice. The war of the Revolution put a stop to the work. The city was in the possession of the British forces; and in the universal appropriation of the public buildings to their use, the Hospital formed no exception. Its airiness and size made it pre-eminently valuable as a barracks, and it was soon filled with British and Hessian soldiers. After the Revolution the Legislature again assisted the Society, and on the 3d of January, 1791, the Hospital was opened for the reception of patients. From that time to the present it has continued to receive the bounty of the State, and to enlarge its sphere of usefulness. It has added to the number of its buildings, and introduced improvements in the original edifice, so that it is now, unquestionably, the finest Hospital in America. In 1796 the governors, acting on the recommendation of the Medical Faculty of Columbia College, appropriated a small sum to the establishment of a medical library, which has since increased to more than 6,000 volumes. In 1810 the name of the corporation was changed to that of "The Society of the New York Hospital."

The Hospital is approached from Broadway by an avenue of 90 feet in width, adorned with magnificent elms, and is surrounded by a high and substantial wall in every other direction. The services of the governors, and of the physicians and surgeons, who are selected from the most eminent of the profession, are gratuitous. Every applicant for admission must procure a recommendation from one of the governors, physicians, or surgeons of the Institute, as to the propriety of his admission. In cases of sudden accident, however, patients are received without any formality.

THE BLOOMINGDALE ASYLUM

For the insane, is located on the Bloomingdale Road, seven miles from the City Hall, and is a branch of the New York Hospital. The principal edifice was commenced in 1818, completed in 1820, and opened for the reception of patients in the month of June, 1821. About forty acres of land are annexed to the Asylum, a portion of which is highly improved. In addition to beautiful walks and gardens, the grounds are embellished with a collection of plants that formerly belonged to the Botanic Garden of Columbia College, and which the trustees of that institution presented to the governors of the Hospital.

This Asylum has received the benefit of the experience of the most noted institutions of the kind in this country and Europe. In 1831, Dr. James McDonald, who had previously been the resident physician to the institution, and who had obtained the necessary information relative to the Insane Asylums here, was commissioned by the governors of the Hospital to cross the Atlantic for the purpose of examining similar institutions in Europe. His mission was successful. After an absence of fifteen months he returned, and by a connection with the Asylum for several years, as its principal, communicated to it, not only the results of his investigations, but the benefits of his experience.

THE NEW YORK INSTITUTION FOR THE INSTRUCTION OF THE DEAF AND DUMB

Is situated on Fiftieth-st., near the Fourth Av. The grounds of the Institution extend from the Fourth to the Fifth Avs., and from Forty-eighth to Fiftieth-sts. One acre is the property of the Institution, and the remaining nine acres is leased at a nominal rent from the Common Council. The Institution was incorporated by the Legislature of this State, April 15th, 1817. The school, however, was not opened till May of the following year. For several years the school was held in the old Almshouse in the Park, and the boarders lived with their teachers in hired houses in the city. The foundation of the present main building was laid in October 1827, the site having been given by the Corporation of the city. The building was then erected and occupied for the first time, in April, 1829. It cost $31,000, and was 110 by 60 feet. It has been found necessary, at several subsequent periods, to enlarge this building by the addition of extensive wings.

The management of the Institution is intrusted to the Board of Directors, twenty-five in number, elected annually by the Society. The President, Harvey P. Peet, M.A., who has been connected with the Institution since 1831, has the general direction and control of its concerns, with the counsel and advice of the Executive Committee. Associated with him in the educational and literary departments are several professors and teachers. Five hours each day are devoted to school exercises, independent of evening studies; and between three and four hours to the prosecution of various trades. The daily exercises of the school are opened and closed with prayer; and religious services are held on the Sabbath, conducted by the President and Professors in rotation.

THE NEW YORK INSTITUTION FOR THE BLIND

Was incorporated April 17th, 1831. It owes its origin mainly to the efforts of Samuel Wood, a well-known member of the Society of Friends; and of Dr. Samuel Akerly, distinguished for his zeal and labors in behalf of the Institution for the Deaf and Dumb.

At a meeting of the Managers, held February 18th, 1832, a Committee was appointed, with power to make arrangements for instructing two or three blind children "*by way of experiment.*" At the next meeting, April 19th, 1832, it was reported by this Committee, that three children had been placed under instruction with a degree of success which "afforded decisive evidence of the capabilities of the blind for receiving instruction." At the close of the same year, the number of pupils had increased to six; and an exhibition of their exercises was given at the City Hotel, which demonstrated the feasibility of the "experiment," and awakened an interest that gave fresh impetus to the cause.

In 1834, the Legislature passed an act providing for the support of thirty-two indigent blind pupils. From this time the Institution maintained a career of increasing prosperity, until it was enabled in 1839, through legislative and private donations, to erect its present building on the Ninth Av. The grounds of the Institution, 800 feet in length, and 200 in width, occupy a square bounded by Thirty-third and Thirty-fourth-sts., and the Eighth and Ninth Avs. The edifice, built of Sing Sing marble, consists of three stories, and is 175 feet in length. In addition to the various apartments used for business and domestic purposes, it contains a chapel, library, dormitories, and school, music, and work-rooms.

THE ORPHAN ASYLUM

Sprung from a meeting held at the City Hotel, on the 15th of March, 1806, and on the 1st of May following, the Asylum was opened in a hired house in Raisin-st., Greenwich village. Its object was to afford refuge, protection, and education to those unfortunate children who had lost both parents, and who, but for this Society, might be thrown among the worst associations.

The public necessity for such an Institution was soon apparent in the ever-increasing number of orphans who applied for admission. The Society became desirous of erecting a commodious building, and petitioned the Legislature for an act of incorporation, which was granted in April, 1807. Four lots in Bank-st. were purchased on credit, and an appeal to the clergy of the different denominations resulted in collections in their respective congregations to provide the means for the erection of the new edifice. The Society, however, was compelled to contract a large debt, and it was some time before it could extricate itself from the embarrassments which that entailed. Thirty years later it was determined to remove the Asylum to a more healthy location. In the mean time the value of their Greenwich property had greatly increased, and the money received for its sale went a good way toward purchasing their present plot of ground at Bloomingdale. On the 9th of June, 1836, the corner stone of the present Asylum was laid, and in 1840 it was completed. A large family of helpless children are now taken care of, and trained in a moral and thorough way for the rough encounters of the world.

THE COLORED ORPHAN ASYLUM

Was organized in the autumn of 1836, and shortly afterward obtained an act of incorporation from the Legislature. The sum of $3,000 was collected, and arrangements made for commencing operations on a limited scale. So great was the prejudice against that portion of the community whom the Society proposed to relieve, that suitable premises could not be procured. They were compelled, therefore, to purchase a house and lots, and to cover the cost of the same with a heavy mortgage. The prosperity of the Society dates from this epoch. In 1840 the managers reported the receipt of $13,000 as a building fund, and two years after they were able to acknowledge a grant, by the corporation of the city, of twenty lots of ground on the Fifth Avenue, between 43d and 44th-sts. On this location they erected their present substantial edifice.

THE NEW YORK DISPENSARY

Was originated in the year 1790, by a few charitable individuals, for the purpose of providing gratuitous medical advice and treatment for the destitute. On the 8th of April, 1795, it was incorporated by the Legislature.

The institution is chiefly supported by private subscription, but receives a small yearly gift from the corporation of the city and from the Legislature.

The Northern Dispensary, at the corner of Waverly Place and Factory-st., and the Eastern Dispensary, in Ludlow-st., are branches of the same institution.

THE MARINE HOSPITAL,

Or, as it is more commonly called, the Quarantine Hospital, is located on the south-east corner of Staten Island, and is designed for the reception of sick passengers, and sailors, and as a protection to the health of the city. It is under the management of the Commissioners of Emigration, and derives its income from a tax levied upon passengers arriving from foreign parts of two dollars for each cabin passenger, and fifty cents for each passenger in the steerage. Dr. Thompson is the present Health Officer.

THE SEAMEN'S RETREAT,

Also on Staten Island, was established by an act of the Legislature passed April 22, 1831, for providing an hospital for sick and disabled seamen, independent of that appropriated to those who are subject to quarantine. Its affairs are conducted by Trustees, denominated the "Trustees of the Seamen's Fund and Retreat in the City of New York," who are empowered to collect from the master of every vessel arriving from a foreign port, for himself one dollar and fifty cents, for each mate one dollar, and for each sailor belonging to his vessel fifty cents, and from the master of each coasting vessel twenty-five cents for each member of the crew. All persons who have paid such dues are eligible for reception into the Retreat.

THE SAILOR'S SNUG HARBOR

Is on the north side of Staten Island, and was founded, in 1801, by the bequest of Captain R. R. Randall, for the maintenance of aged and infirm seamen. The value of the original property was $50,000, but has since considerably increased. An act of incorporation was obtained from the Legislature in February, 1806. The

Asylum occupies a beautiful location, and is surrounded with delicious grounds.

THE AMERICAN BIBLE SOCIETY

Was organized on the 8th of May, 1816, by delegates from existing local Bible Societies, and other friends of the object. Its government is intrusted to thirty-six managers. The receipts of this Society have rapidly increased, and the sphere of its usefulness been much enlarged. The Society has published various versions of the Bible in almost every language, and has distributed many millions of copies all over the land.

THE AMERICAN TRACT SOCIETY

Was organized in May, 1825, and incorporated by the Legislature May, 1841. The Institution prints and distributes a great mass of religious literature, such "as shall receive the approbation of all evangelical Christians." Many millions of tract and pamphlet volumes are distributed by this Society annually, and a vast amount of good effected. The Publishing, Distributing, and Finance Committees, have the supervision of the several departments indicated by their appellations, and to them collectively, under the title of the Executive Committee, is intrusted the entire management of the concerns of the Society.

MERCANTILE LIBRARY ASSOCIATION.

This association, which was organized for the special benefit of merchants' clerks, is one of the most useful institutions of its kind in the city of New York. It has a library of 47,000 volumes, also an elegant reading-room, in which are to be found the various foreign and domestic periodical literature and newspapers of the day; and a commodious and beautiful lecture-room, all in their new building, Clinton Hall, in Astor-place.

THE ASTOR LIBRARY.

Our citizens are indebted to the late John Jacob Astor for the best library on this continent, and one of the best in the world. The library building is situated in Lafayette Place, and is an ornament to the city. Eighty thousand volumes are contained in this elegant building, and are open to inspection of all, free of charge. The library is open daily from 10 A. M. till 5 P. M. Wm. B. Astor, Esq., is about to erect at his own expense an addition to the building, which will afford shelving for 80,000 more volumes.

NEW YORK CITY BANKS.

American Exchange Bank, 50 Wall-st., cap. $3,000,000, W. A. Booth, president, Robert S. Oakley, cashier.

Artizan's Bank, 117 Nassau-st., Nathan C. Platt, president, Charles T. Leak, cashier.

Atlantic Bank, Beaver, cor. William-st., cap. $400,000, J. E. Southworth, president, G. D. Arthur, cashier.

Bank of America, 46 Wall-st., cap. $2,000,000, George Newbold, president, James Punnett, cashier.

Bank of Commerce, cor. Nassau and Cedar-sts., cap. $5,000,000, John A. Stevens, president, H. F. Vail, cashier.

Bank of New York, 85 William-st., cap. $2,000,000, John Oothout, president, W. B. Meeker, cashier.

Bank of North America, 31 Wall-st., cap. $1,000,000, W. F. Havemeyer, president, J. Seymour, cashier.

Bank of the Commonwealth, 36 William-st., cap. $750,000, Paul Spofford, president, George Ellis, cashier.

Bank of the Republic, cor. Broadway and Wall-st., cap. $1,500,000, J. T. Soulter, president, R. H. Lowry, cashier.

Bank of the State of New York, cor. William-st. and Exchange Place, cap. $2,000,000, C. W. Lawrence, president, R. Withers, cashier.

Bowery Bank, cor. Broome-st. and Bowery, cap. $356,650, Enoch Dean, president, N. G. Bradford, cashier.

Broadway Bank, cor. Broadway and Park Place, cap. $600,000, F. A. Palmer, president, John L. Everitt, cashier.

Bull's Head Bank, 338 Third Av., cap. $200,000, Richard Williamson, president, C. S. Vanderhof, cashier.

Butchers' and Drovers' Bank, cor. Grand-st. and Bowery, cap. $450,000, Jacob Aimes, president, Benedict Lewis, Jr., cashier.

Chatham Bank, cor. Chatham and Duane-sts., cap. $600,000, John Leveridge, president, O. H. Schreiner, cashier.

Chemical Bank, 270 Broadway, cap. $300,000, J. Q. Jones, president, G. G. Williams, cashier.

Citizens' Bank, 54 Bowery, cap. $400,000, Jay Jarvis, president, S. R. Comstock, cashier.

City Bank, 52 Wall-st., cap. $1,000,000, Moses Taylor, president, Robert Strong, cashier.

Continental Bank, 12 Wall-st., cap. $1,500,000, W. T. Hooker, president, B. F. Warner, cashier.

Corn Exchange Bank, 67 Pearl-st., cap. $914,000, E. W. Durham, president, F. A. Platt, cashier.

Delaware and Hudson Canal Co., cap. $7,200,000, John Wurts, president, Isaac N. Seymour, cashier.

Dry Dock Bank, cor. Av. D. and Tenth-st., cap. $420,000, David Palmer, president, F. T. Hayes, cashier.

East River Bank, cor. Third Av. and St. Mark's Place, cap. $413,050, David Banks, president, W. B. Ballow, cashier.

Fulton Bank, cor. Pearl and Fulton-sts., cap. $600,000, J. Kernochan, president, W. I. Lane, cashier.

Greenwich Bank, 402 Hudson-st., cap. $200,000, B. F. Wheelwright, president, W. Hawes, cashier.

Grocers' Bank, 59 Barclay-st., cap. $300,000, Charles Dennison, president, H. D. Williams, cashier.

Hanover Bank, 37 Nassau-st., cap. $1,000,000, W. H. Johnson, president, T. L. Taylor, cashier.

Importers' and Traders' Bank, 245 Broadway, cap. $1,500,000, Lucius Hopkins, president, G. R. Connover, cashier.

Irving Bank, cor. Greenwich and Warren-sts., cap. $300,000, John Thomson, president, D. V. H. Berthrolf, cashier.

Island City Bank, 150 Broadway, cap. $300,000, James O'Brien, president, William Stebbins, cashier.

Leather Manufacturers' Bank, 45 William-st., cap. $600,000, W. H. Macy, president, Thomas R. Acly, cashier.

Manhattan Co., 40 Wall-st., cap. $2,050,000, C. O. Halstead, president, J. M. Morrison. cashier.

Marine Bank, 90 Wall-st., cap. $500,000, T. Williams, Jr., president, J. C. Beach, cashier.

Market Bank, cor. Pearl and Beekman-sts., cap. $650,000, R. S. Williams, president, R. H. Haydock, cashier.

Mechanics' Banking Association, 38 Wall-st., cap. $632,000, Frederic Pentz, president, John J. Stephens, cashier.

Mechanics' Bank, cor. William-st. and Exchange Place, cap. $2,000,000, S. Knapp, president, Gideon de Angelis, cashier.

Mechanics' and Traders' Bank, 379 Grand-st., cap. $200,000, John Clapp, president, E. D. Brown, cashier.

Mercantile Bank, 190 Broadway, cap. $1,000,000, O. H. Arnold, president, E. J. Blake, cashier.

Merchants' Bank, 42 Wall-st., cap. $1,490,000, John J. Palmer, president, A. E. Silliman, cashier.

Merchants' Exchange Bank, 173 Greenwich-st., cap. $1,235,000, J. Van Nostrand, president, E. J. Oakley, cashier.

Metropolitan Bank, cor. Broadway and Pine-st., cap. $2,000,000, James McCall, president, Henry Meigs, cashier.

Nassau Bank, cor. Nassau and Beekman-sts., cap. $500,000, Thomas McElrath, president, R. A. Tooker, cashier.

National Bank, 36 Wall-st., cap. $750,000, James Gallatin, president, B. P. Hoogland, cashier.

New York County Bank, cor. Eighth Av. and West Fourteenth-st., cap. $200,000. Francis Leland, president, Alexander Masterton, Jr., cashier.

New York Exchange Bank, 137 Greenwich-st., cap. $130,000, S. Van Ducer, president, D. B. Halstead, cashier.

North River Bank, 175 Greenwich-st., cap. $650,000, M. O. Roberts, president, A. B. Hays, cashier.

Ocean Bank, cor. Greenwich and Fulton-sts., cap. $1,000,000, D. R. Martin, president, Parker Handy, cashier.

Oriental Bank, 311 East Broadway, cap. $300,000, J. M. Price, president, W. A. Hall, cashier.

Pacific Bank, 461 Broadway, cap. $422,700, J. Campbell, president.

Park Bank, cor. Beekman-st. and Theater Alley, cap. $2,000,000, Reuben H. Howes, president, Charles A. Macy, cashier.

People's Bank, 173 Canal-st., cap. $412,500, J. P. Yelverton, president, G. W. Leake, cashier.

Phenix Bank, 45 Wall-st., cap. $1,200,000, Thomas Pileston, president, P. M. Bryson, cashier.

Seventh Ward Bank, cor. Pearl-st. and Burling Slip, cap. $500,000, William Halsey, president, A. S. Fraser, cashier.

St. Nicholas Bank, 6 Wall-st., cap. $500,000, Caleb Barston, president, Archibald Parkhurst, cashier.

Shoe and Leather Bank, cor. Broadway and Chambers-st., cap. $600,000, A. F. Stout, president, W. A. Kissam, cashier.

Tradesman's Bank, 177 Chatham-st., cap. $600,000, W. H. Falls, president, Richard Berry, cashier.

Union Bank, 34 Wall-st., cap. $1,500,000, F. Denning, president, E. H. Arthur, cashier.

SAVINGS' BANKS IN NEW YORK.

Bank for Savings, 67 Bleeker-st., Najah Taylor, president, James F. Depeyster, treasurer.

Bloomingdale Savings' Bank, cor. Broadway and West Thirty-second-st., Enoch T. Winter, president, John Waite, treasurer.

Bowery Savings' Bank, 130 Bowery, James Mills, president, G. H. Coggeshall, treasurer.

Broadway Savings' Bank, cor. Broadway and Park Place, F. P. Scehoals, president, F. A. Palmer, treasurer.

Dry Dock Savings' Bank, 619 Fourth-st., Andrew Mills, president, James L. Stuart, treasurer.

East River Savings' Bank, 3 Chambers-st., Peter H. Titus, president, Charles A. Whitney, treasurer.

Emigrant Industrial Savings' Bank, 51 Chambers-st., Joseph Stuart, president, F. C. Tucker, treasurer.

Greenwich Savings' Bank, 73 Sixth Av., W. Mandeville, president, Clinton Gilbert, treasurer.

Institution for Savings of Merchants' Clerks, 516 Broadway, Moses H. Grinnell, president, Andrew Warner, treasurer.

Irving Savings' Bank, 96 Warren-st., Caleb S. Woodhull, president, John Thomson, treasurer.

Manhattan Savings' Bank, 644 Broadway, E. J. Brown, president, A. A. Alvord, treasurer.

Mariners' Savings' Bank, cor. Third Av. and Ninth-st., Jacob A. Westervelt, president, William H. Ellsworth, treasurer.

Mechanics' and Traders' Savings' Bank, 482 Grand-st., Alfred T. Conklin, president, James P. Haight, treasurer.

Rose Hill Savings' Bank, 251 Third Av., William H. Platt, president, H. Loofborrow, treasurer.

Seamen's Bank for Savings, 78 Wall-st., Pelatiah Perrit, president, E. Platt, treasurer.

Sixpenny Savings' Bank, Clinton Hall, Astor Place, Elijah F. Purdy, president, J. S. Sloan, treasurer.

TRUST COMPANIES.

Farmers' Loan and Trust Co., 28 Exchange Place, cap. $2,000,000, D. D. Williamson, president, G. P. Fitch, secretary.

Ohio Life Insurance and Trust Co. of Cincinnati, cap. $223,000, Charles Stetson, president, Samuel P. Bishop, secretary.

United States Trust Co., 40 Wall-st., cap, $1,000,000, Joseph Lawrence, president, John A. Stewart, treasurer.

INSURANCE COMPANIES IN NEW YORK CITY.

Ætna Insurance Co., cap. $200,000, 56 Wall-st.

Arctic Fire Insurance Co., cap. $250,000, 19 Wall-st.

Astor Mutual Insurance Co., cap. $150,000, 45 Wall-st. and 67 Chatham-st.

Atlantic Mutual Insurance Co., 51 Wall-st.

Beekman Fire Insurance Co., cap. $200,000, 8 Wall-st.

Bowery Fire Insurance Co., cap. $300,000.

Broadway Fire Insurance Co., cap. $200,000, 433 Broadway and 4 Wall-st.

Citizens' Fire Insurance Co., cap. $150,000, 67 Wall-st. and 58 Broadway.

City Fire Insurance Co., cap. $210,000, 61 Wall-st.

Clinton Fire Insurance Co., cap. $250,000, 52 Wall-st.

Columbia Fire Insurance Co., cap. $200,000, 59 Barclay-st.

Commercial Fire Insurance Co., cap. $200,000, 49 Wall-st.

Commonwealth Fire Insurance Co., cap. $250,000, 6 Wall-st.

Continental Insurance Co., cap. $500,000, 18 Wall-st.

Corn Exchange Fire Insurance Co., cap. $200,000, corner Beaver and William-sts.

Eagle Fire Insurance Co., cap. $300,000, 71 Wall-st.

East River Fire Insurance Co., cap. $150,000, 69 Wall-st.

Empire City Insurance Co., cap. $200,000, 54 Wall-st.

Enterprise Insurance Co., cap. $150,000, 11 Pine-st.

Excelsior Fire Insurance Co,, cap. $200,000, 6 Broad-st.

Firemen's Insurance Co., cap. $204,000, 59 Wall-st.

Fulton Fire Insurance Co., cap. $150,000, 40 Wall-st.

Granite Insurance Co., cap. $250,000.

Greenwich Insurance Co., cap. $200,000, 400 Hudson-st.

Grocer's Fire Insurance Co., cap. $200,000, 81 Wall-st.

Hamilton Fire Insurance Co., cap. $150,000, 11 Wall-st.

Hanover Fire Insurance Co., cap. $150,000, 35 Nassau-st.

Harmony Fire Insurance Co., cap. $150,000, 6 Broad-st.

Home Insurance Co., cap, $500,000, 4 Wall-st.

Howard Insurance Co., cap. $250,000, 66 Wall-st.

Irving Fire Insurance Co., cap. $200,000, 9 Wall-st. and 285 Greenwich-st.

Jefferson Insurance Co., cap. $200,000, 50 Wall-st.

Knickerbocker Fire Insurance Co., cap. $280,000, 64 Wall-st.

La Farge Fire Insurance Co., cap. $150,000, corner Nassau and Cedar-sts.
Lenox Fire Insurance Co., cap. $150,000, 54 Wall-st.
Lorillard Fire Insurance Co., cap. $200,000, 61 Chambers and 63 Wall-st.
Manhattan Fire Insurance Co., cap. $250,000, 68 Wall-st.
Market Fire Insurance Co., cap. $200,000, corner Pearl and Beekman-sts.
Mechanics' and Traders' Fire Insurance Co., cap. $200,000, 74 Wall-st.
Mercantile Fire Insurance Co., cap. $200,000, 55 Wall-st.
Merchants' Insurance Co., cap. $200,000, corner Fulton and Greenwich-sts.
Metropolitan Fire Insurance Co., cap. $300,000, 108 Broadway, corner Pine.
National Fire Insurance Co., cap. $150,000, 52 Wall-st.
National Protection Insurance Co., cap. $150,000, 52 Wall-st.
National (Boston) Insurance Co., cap. $500,000, 18 Merchants' Exchange.
New Amsterdam Fire Insurance Co., cap. $200,000, 7 Wall-st.
New World Fire Insurance Co., cap. $200,000, 35 Pine-st.
New York Equitable Insurance Co., cap. $210,000, 58 Wall-st.
New York Fire and Marine Insurance Co., cap. $200,000, 72 Wall-st.
Niagara Fire Insurance Co., cap. $200,000, 67 Wall-st.
North American Fire Insurance Co., cap. $250,000, 6 Wall-st.
North River Insurance Co., cap. $350,000, 202 Greenwich-st.
Pacific Fire Insurance Co., cap. $200,000, 60 Wall-st.
Park Fire Insurance Co., cap. $200,000, 237 Broadway and 8 Merchants' Exchange.
Peoples' Fire Insurance Co., cap. $150,000, 140 Canal-st.
Peter Cooper Fire Insurance Co., cap. $150,000, corner Third Av. and Ninth-st.; and 61 Wall-st.
Reliance Mutual Insurance Co., cap. $250,000, 75 Liberty-st.
Republic Fire Insurance Co., cap. $150,000, 74 Wall-st.
Royal Fire Insurance Co., cap. $10,000,000, 76 Wall-st.
Rutgers' Fire Insurance Co., cap. $200,000, cor. Mott and Chatham-sts.
Saint Marks Fire Insurance Co., cap. $150,000, 67 Wall-st.
Saint Nicholas Insurance Co., cap. $150,000, cor. Eighth Av. and
Security Fire Insurance Co., cap. $200,000, 31 Pine-st.
West Fourteenth-st.; and 12 Wall-st.
Stuyvesant Fire Insurance Co., cap. $200,000, 153 Bowery and 4 Broad-st.
Union Mutual Insurance Co., cap. $1,042,000, 58 Wall-st.
United States Fire Insurance Co., cap. $850,000, 69 Wall-st.
Washington Insurance Co., cap. $200,000, 54 Wall-st.

LIFE INSURANCE COMPANIES.

Howard Life Insurance Co., cap. $110,000, 40 Wall-st.
International Life Insurance Co., cap. $2,500,000, 71 Wall-st.

Knickerbocker Life Insurance Co., cap. $100,000, 17 William-st.
Manhattan Life Insurance Co., cap. $100,000, 146 Broadway.
Mutual Life Insurance Co. of New York, cap. $2,500,000, 111 Broadway.
New York Life Insurance Co. cap. $900,000, 106 Broadway.
New York Life Insurance and Trust Co., cap. $1,000,000, 52 Wall-st.
United States Life Insurance Co., cap. $1,000,000, 93 William-st.

MARINE INSURANCE COMPANIES.

Astor Mutual Insurance Co., cap. $700,000, 45 Wall-st.
Atlantic Mutual Insurance Co., cap. $1,000,000, 51 Wall-st.
Commercial Mutual Insurance Co., 50 Wall-st.
Globe Mutual Insurance Co., cap. $300,000, 37 Wall-st.
Great Western Insurance Co., cap. $500,000, 33 Pine-st.
Mercantile Mutual Insurance Co., cap. $1,000,000, 35 Wall-st.
New York Mutual Insurance Co.
Ocean Insurance Co., cap. $400,000, 70 Wall-st.
Orient Mutual Insurance Co., cap. $500,000, 2 and 4 Merchants' Exchange.
Pacific Mutual Insurance Co., 111 Broadway.
Sun Mutual Insurance Co., 49 Wall-st.

BANKS IN BOSTON.

Atlantic Bank,	cap.	$500,000	Market Bank,	"	560,000
Atlas Bank,	"	500,000	Massachusetts Bank,	"	800,000
Bank of Commerce,	"	2,000,000	Maverick Bank,	"	400,000
Bank of N. Am.,	"	750,000	Mechanics' Bank,	"	250,000
Blackstone Bank,	"	750,000	Merchants' Bank,	"	4,000,000
Boston Bank,	"	900,000	National Bank of Boston,	"	750,000
Boylston Bank,	"	400,000	New Eng. Bank,	"	1,000,000
Broadway Bank,	"	150,000	North Bank,	"	900,000
City Bank,	"	1,000,000	Shawmut Bank,	"	750,000
Columbia Bank,	"	750,000	Shoe & Leather Dealers' Bank,	"	1,000,000
Eagle Bank,	"	700,000	State Bank,	"	1,800,000
Eliot Bank,	"	750,000	Suffolk Bank,	"	1,000,000
Exchange Bank,	"	1,000,000	Traders' Bank,	"	600,000
Faneuil Hall Bank,	"	500,000	Tremont Bank,	"	1,250,000
Freeman's Bank,	"	400,000	Union Bank,	"	1,000,000
Globe Bank,	"	1,000,000	Washington Bank,	"	750,000
Granite Bank,	"	900,000	Webster Bank,	"	1,500,000
Hamilton Bank,	"	500,000			
Howard Bank'g Co.,	"	750,000			

SAVINGS' BANKS IN BOSTON.

Boston Five Cents Savings' Bank.
East Boston Savings' Bank.
Provident Institution for Savings.
Suffolk Savings Bank.
People's Savings' Bank.

INSURANCE COMPANIES IN BOSTON.

Alliance Insurance Co.
American Insurance Co., cap. $300,000.
Appleton Mutual Fire Insurance Co.
Boston Insurance Co., cap. $300,000.
Boston Manufacturers' Mutual Fire Insurance Co.
Boston Mutual Fire Insurance Co.
Boylston Fire and Marine Insurance Co., cap. $300,000.
China Mutual Insurance Co.
Cochituate Fire Insurance Co., cap. $150,000.
Commercial Mutual Marine Insurance Co.
Eagle Fire Insurance Co.
Eliot Fire Insurance Co., cap. $200,000.
Equitable Safety Marine and Fire Insurance Co.
Faneuil Hall Insurance Co., cap. $500,000.
Fireman's Insurance Co., cap. $300,000.
Fireman's Life Insurance Co., cap. $100,000.
Franklin Insurance Co., cap. $300,000.
Hope Insurance Co., cap. $200,000.
Manufacturers' Insurance Co., cap. $400,000.
Mass. Hospital Life Insurance Co., cap. $500,000.
Mass. Mutual Fire Insurance Co.
Mechanics' Mutual Fire Insurance Co.
Mercantile Marine Insurance Co., cap. $300,000.
Merchants' Insurance Co., cap. $500,000.
National Insurance Co., cap. $500,000.
New England Mutual Life Insurance Co.
New England Mutual Marine Insurance Co.
Neptune Insurance Co., cap. $300,000.
North American Fire Insurance Co., cap. $200,000.
Shawmut Mutual Fire Insurance Co.
Shoe and Leather Dealers' Marine Insurance Co.
State Mutual Fire Insurance Co.
Suffolk Insurance Co., cap. $225,000.
Trader's Mutual Fire Insurance Co.
Tremont Mutual Insurance Co.
Triton Insurance Co.
Union Mutual Fire Insurance Co.
Union Mutual Life Insurance Co., cap. $500,000.
United States Insurance Co., cap. $200,000.
Washington Insurance Co., cap. $200,000.
Warren Insurance Co., cap. $150,000.

BANKS IN PHILADELPHIA.

Bank of Commerce, cap. $250,000.
Bank of Germantown, cap $200,000.
Bank of North America, cap. $1,000,000.
Bank of Northern Liberties, cap. $450,000.

Bank of Pennsylvania, cap. $1,875,000.
Bank of Penn Township, cap. $225,000.
City Bank, cap. $500,000.
Commercial Bank of Pennsylvania, cap. $1,000,000.
Consolidation Bank, cap. $250,000.
Farmers' and Mechanics' Bank, $1,250,000.
Girard Bank, cap. $1,250,000.
Kensington Bank, cap. $250,000.
Manufacturers' and Mechanics' Bank, cap. $300,000.
Mechanics' Bank, cap. $800,000.
Philadelphia Bank, cap. $1,150,000.
Southwark Bank, cap. $250,000.
Tradesmen's Bank, cap. $150,000.
Western Bank, cap. $418,600.

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SAVINGS' BANKS IN PHILADELPHIA.

Dinie Savings' Institution.
Five Per Cent Savings' Fund.
Deposit and Loan Co., cap. $500,000.
Mutual Deposit Co., cap. $200,000.
Philadelphia Savings' Fund Society.
Savings' Fund of the National Safety Co. (deposits), cap. $1,000,000.
Savings' Fund of the United States Co.
Seamen's Savings' Fund.
Sixpenny Savings' Fund of Pennsylvania.
Western Savings' Fund Society of Philadelphia.

FIRE INSURANCE COMPANIES IN PHILADELPHIA.

American Fire Insurance Co.
Commonwealth Fire Insurance Co. of the State of Pennsylvania, cap. $500,000.
Equitable Mutual Insurance Co., cap. $250,000.
Fire Association.
Fire Insurance Co. of the County of Philadelphia, cap. $400,000.
Franklin Fire Insurance Co., cap. $400,000.
Jefferson Fire Insurance Co., cap. $500,000.
Mechanics' Insurance Co.
Mutual Assurance Co.
Mutual Fire and Life Stock Insurance Co., cap. $100,000.
Pennsylvania Fire Insurance Co.
Philadelphia Contributionship Spring Garden Insurance Co., cap. $120,000.

MARINE INSURANCE COMPANIES IN PHILADELPHIA.

American Mutual Insurance Co.
Mercantile Mutual Insurance Co.
Phœnix Mutual Insurance Co., cap. $250,000.
Union Mutual Insurance Co., cap. $300,000,
Washington Mutual Insurance Co.

FIRE AND MARINE INSURANCE COMPANIES IN PHILADELPHIA.

Anthracite Insurance Co., cap. $400,000.
Atlantic Mutual Insurance Co., cap. $500,000.
Columbia Mutual Insurance Co.
Commercial Mutual Insurance Co., cap. $200,000.
Delaware Mutual Safety Insurance Co., cap. $620,000.
Farmers' and Mechanics' Insurance Co., cap. $300,000.
Girard Fire and Marine Insurance Co., cap. $300,000.
Globe Insurance Co.
Hope and Mutual Insurance Co., cap. $500,000.
Importers' and Traders' Insurance Co., cap. $500,000.
Independent Mutual Insurance Co., cap. $300,000.
Insurance Co. of North America, cap. $500,000.
Keystone Insurance Co., cap. $300,000.
Manufacturers' Insurance Co., cap. $500,000.
Merchants' Fire and Marine Insurance Co.
North Western Insurance Co., cap. $300,000.
Pennsylvania Mutual Insurance Co. of Pennsylvania, cap. $200,000.
Philadelphia Insurance Co., cap. $175,000.
Reliance Mutual Insurance Co., cap. $232,000.
Western Insurance Co.

WARD SCHOOLS IN NEW YORK.

UNDER THE SUPERVISION OF THE TRUSTEES OF THE SEVERAL WARDS IN WHICH THE SCHOOLS ARE LOCATED.

No. 1—Fourth Ward, 245 William-st.
2—Seventh " 116 Henry-st,
3—Ninth " cor. Hudson and Grove-sts.
4—Thirteenth " 203 Rivington-st.
5—Fourteenth " 222 Mott-st.
6—Twelfth " Randall's Island.
7—Tenth " 60 Chrystie-st.
8—Eighth " 66 Grand-st.
9—Twenty-second " Eighty-second-st. and Eleventh Av.
10—Fifteenth " 180 Wooster-st.
11—Sixteenth " Seventeenth-st., near Eighth Av.
12—Seventh " 371 Madison-st.
13—Seventeenth " 298 Houston-st.
14—Twenty-first " Twenty-seventh-st., near Third Av.
15—Eleventh " 289 Fifth-st.
16—Ninth " Thirteenth-st., near Seventh Av.
17—Twenty-second " Forty-seventh-st. bet. 8th and 9th Avs.
18—Nineteenth " Fifty-first-st. near Lexington Av.
19—Seventhteenth " cor. First Av. and Ninth-st.
20—Tenth " Ludlow-st., near Delancey.
21—Fourteenth " Marion-st., near Prince.
—Eleventh " cor. Stanton and Sheriff-sts.

No. 23—Sixth Ward, 26 and 28 City Hall Place.
24—Sixth " Elm-st., near Leonard.
25—Fourth " 13 Oak-st.
26—Fourth " 32 James-st.
27—Fourth " 74 Oliver-st.
28—Twenty-second " Fortieth-st., bet. Seventh & Eighth Avs.
29—First " 97 and 99 Greenwich-st.
30—Eleventh " 276 Second-st.
31—Seventh " Monroe-st., near Mongomery.
32—Fonrteenth " Baxter-st. near Grand.
33—Twentieth " Thirty-fifth-st., near Ninth Av.
34—Thirteenth " Broome-st. bet. Sheriff and Willet.
35—Fifteenth " Thirteenth-st., near Sixth Av.
36—Eleventh " Ninth-st., near Av. C.
37—Twelfth " Eighty-seventh-st., near Fourth Av.
38—Eighth " Clark-st., near Broome.
39—Twelfth " 129th-st., bet. Second and Third Avs.
40—Eighteenth " Twentieth-st., bet. First & Second Avs.
41—Ninth " Greenwich Av., opposite Charles-st.
42—Tenth " Allan-st., bet. Walker and Hester.
43—Twelfth " 129th-st., Manhattanville.
44—Fifth " cor. North Moore and Varick-sts.
45—Sixteenth " Twenty-fourth-st., bet. 7th and 8th Avs.
46—Twelfth " 156th-st., Carmansville.
47—Fifteenth " 12th-st., bet. Bdway & University Place.
48—Twenty-second " Twenty-eighth-st., bet. 6th and 7th Avs.
49—Twenty-first " Thirty-seventh-st., near Second Av.
50—Eighteenth " Twentieth-st., bet. 2d and 3d Avs.

PRIMARY SCHOOLS.

No. 1—88 Orchard-st., near Broome.
2—103 Bayard-st., near Orange.
3—100 Cannon-st., near Stanton.
4—Chrystie-st., near Delancey.
5—401 Cherry-st., near Scammel.
7—321 Sixth-st.
8—61 Thompson-st.
10—170 Amos-st.
13—103 Bayard-st.
14—Rear of 60 Chrystie-st.
15—36 Stanton-st.
16—Cannon-st., near Broome.
17—461 Greenwich-st.
18—410 Cherry-st.
20—Corner Av. C and Fourth-st.
22—Corner Bleecker and Downing-sts.
23 }—61 Thompson-st.
24 }
25 }—93 West Seventeenth-st.
26 }

No. 27—174 Amos-st.
28—114 White-st.
29
30 }—3 Stone-st.
31
32 }—175 Barrow-st.
33—Twenty-fifth-st., between Madison and Fourth Avs.
34—Corner Forty-third-st. and Eighth Av.
35—461 Greenwich-st.
36
37 }—Waverley Place, near Bank-st.
38—Rear of 60 Chrystie-st.
39—233 West Eighteenth-st.
40—Rear of 147 Clinton-st.
42—100 Cannon-st.
43
44 }—Corner Rivington and Goerck-sts.
45—Corner Houston and Eldridge-sts.
46
47 }—Eleventh-st., between Third and Fourth Avs.
48—233 West Eighteenth-st.
49—Horatio-st., near Hudson.
50
51 }—545 Greenwich-st.
52—Twenty-fifth-st., between Madison and Fourth Avs.
53—Fourth-st., near Av. C.
54—Twenty-ninth-st., near Ninth Av.
55—Eighty-fourth-st., near Fourth Av.
56—Thirty-seventh-st., near Tenth Av.
57—In the Demilt Dispensary Building, Twenty-third-st. and Second Av.
58—Nineteenth-st., between First Av. and Av. A.

COLORED SCHOOLS.

No. 1—135 Mulberry-st.
2—51 Laurens-st.
3—Eighty-fifth-st., between Seventh and Eighth Avs.
4—117th-st., near Second Av.
5—19 Thomas-st.
6—Corner Twenty-ninth-st. and Second Av.

COLORED PRIMARY SCHOOLS.

No. 1—Fifteenth-st., near Seventh Av.
2
3 }—Rear of church in Second-st., near Av. C.

LIBRARIES IN NEW YORK.

Astor Library	80,000	volumes.
New York Society Library	40,000	“
Mercantile Library Association	47,000	“
New York Historical Society	25,000	“
Apprentices' Library	18,000	“
Library of Free Academy	15,000	“
New York Law Institute	6,000	“
Library of American Institute	7,500	“
“ Columbia College and Literary Society	24,000	“
“ Union Theological Seminary . .	24,000	“
“ Episcopal Theological Seminary .	12,000	“
“ Lyceum of Natural History . .	3,000	“
“ New York Hospital . . .	6,000	“
“ Young Men's Christian Association .	2,000	“
“ Mechanics' Institute	3,000	“
Printers' Free Library	4,000	“
Library of College of Physicians and Surgeons .	1,500	“
“ American Bible Society	1,500	“
“ Presbyterian Board of Foreign Missions	3,000	“
“ American Bible Union	4,000	“
“ American and Foreign Bible Society	1,000	“
Merchants' and Clerks' Library Association .	600	“
New York City Library	2,000	“
Library of American Geographical Society .	300	“
“ Spingler Institute	2,000	“
“ Rutgers' Institute	2,190	“
“ New York University and Literary Societies	2,700	“
Total number of volumes . .	336,290	

The following is the proportion of nutritious matter and water in 100 lbs. of each of the following substances:

Substances.	lbs. nut. matter.	lbs. water.	Substances.	lbs. nut. matter.	lbs. water.
Wheat flour	90	10	Beets...............	15	85
Corn meal..........	91	9	Strawberries........	10	90
Rice................	83	14	Pears	16	84
Barley meal.........	88	12	Apples..............	16	84
Rye flour...........	79	21	Cherries............	25	75
Oatmeal........	75	25	Plums...............	29	71
Potatoes............	22½	77½	Apricots............	26	74
White beans.........	95	5	Peaches.............	20	80
Carrots.............	10	90	Grapes..............	27	73
Turnips.............	4½	95½	Melons........... .	3	97
Cabbage............	7½	92½	Cucumbers.........	2½	97½

TABLE

Of the Angles which every point and quarter-point of the Compass makes with the Meridian.

NORTH.		Points.	°	′	″	Points.	SOUTH.	
		0¼	2	48	45	0¼		
		0½	5	37	30	0½		
		0¾	8	26	15	0¾		
N. by E.	N. by W.	1	11	15	0	1	S. by E.	S. by W.
		1¼	14	3	45	1¼		
		1½	16	52	30	1½		
		1¾	19	41	15	1¾		
N.N.E.	N.N.W.	2	22	30	0	2	S.S.E.	S.S.W.
		2¼	25	18	45	2¼		
		2½	28	7	30	2½		
		2¾	30	56	15	2¾		
N.E. by N.	N.W. by N.	3	33	45	0	3	S.E. by S.	S.W. by S.
		3¼	36	33	45	3¼		
		3½	39	22	30	3½		
		3¾	42	11	15	3¾		
N.E.	N.W.	4	45	0	0	4	S.E.	S.W.
		4¼	47	48	45	4¼		
		4½	50	37	30	4½		
		4¾	53	26	15	4¾		
N.E. by E.	N.W. by W.	5	56	15	0	5	S.E. by E.	S.W. by W.
		5¼	59	3	45	5¼		
		5½	61	52	30	5½		
		5¾	64	41	15	5¾		
E.N.E.	W.N.W.	6	67	30	0	6	E.S.E..	W.S.W.
		6¼	70	18	45	6¼		
		6½	73	7	30	6½		
		6¾	75	56	15	6¾		
E. by N.	W. by N.	7	78	45	0	7	E. by S.	W. by S.
		7¼	81	33	45	7¼		
		7½	84	22	30	7½		
		7¾	87	11	15	7¾		
E.	W.	8	90	0	0	8	E.	W.

FIRE DEPARTMENT.

The city is divided into Eight Fire Districts.

THE FIRST FIRE DISTRICT comprises all that part of the city lying north of Twenty-second-st., and east of the Sixth Av.

THE SECOND FIRE DISTRICT comprises all that part of the city lying north of Twenty-second-st., and west of the Sixth Av.

THE THIRD FIRE DISTRICT comprises all that part of the city bounded and containing as follows: beginning at the foot of North Moore-st. on the North River, and extending easterly in a straight line to the corner of Leonard and Church-sts.; thence northerly in a straight line to the corner of Eighth Av. and Twenty-second-st.; thence westerly along Twenty-second-st. to the North River; thence southerly along the North River, to the place of beginning.

THE FOURTH FIRE DISTRICT comprises all that part of the city bounded and containing as follows: beginning at the corner of Leonard and Church-sts.; running thence northerly, in a straight line to the corner of Eighth Av. and Twenty-second-st.; thence easterly along Twenty-second-st. to Lexington Av.; thence southerly, in a straight line to the corner of Elm and Leonard sts.; and thence westerly, in a straight line to the corner of Church and Leonard-sts.

THE FIFTH FIRE DISTRICT comprises all that part of the city bounded and containing as follows: commencing at the corner of Elm and Leonard-sts., and running thence northerly in a straight line to the corner of Lexington Av. and Twenty-second-st.; thence easterly, along Twenty-second-st. to the East River; thence southerly along the East River to Fourteenth-st.; thence south-westerly in a straight line to the corner of Leonard and Orange-sts.; thence westerly in a straight line to the place of beginning.

THE SIXTH FIRE DISTRICT comprises all that part of the city bounded and containing as follows: beginning at the corner of Leonard and Orange-sts., and running thence easterly in a straight line to the foot of Market-st., on the East River; thence along the East river to Fourteenth-st.; thence south-westerly in a straight line to the place of beginning.

THE SEVENTH FIRE DISTRICT comprises all that part of the city bounded and containing as follows: beginning at the foot of Market-st. on the East River, and running thence westerly in a straight line to the corner of Leonard and Elm-sts.; thence southerly along a straight line, intersecting Wall-st. at the junction of Nassau, Wall, and Broad sts., and continued through the Battery to the North River.

THE EIGHTH FIRE DISTRICT comprises all that part of the city bounded and containing as follows: beginning at the foot of North Moore-st. on the North River, and running thence easterly in a straight line to the corner of Leonard and Elm-sts.; thence southerly, along a straight line intersecting with Wall-st. at the junction of Nassau, Wall, and Broad-sts., and continued through the Battery to the North River.

THE FORCE OF FIRE ENGINES, ETC., IN EACH FIRE DISTRICT.

FIRST DISTRICT.—11 engines, 7 hose-carriages, and 3 hook and ladder trucks.

SECOND DISTRICT.—8 engines, 5 hose-carriages, and 2 hook and ladder trucks.

Third District.—4 engines, 10 hose-carriages, and 2 hook and ladder trucks.

Fourth District.—6 engines, 6 hose-carriages, and 2 hook and ladder trucks.

Fifth District.—4 engines, 5 hose-carriages, and 1 hook and ladder truck.

Sixth District.—8 engines, 15 hose-carriages, and 3 hook and ladder trucks.

Seventh District.—4 engines, 5 hose-carriages, and 1 hook and ladder truck.

Eighth District.—4 engines and 5 hose-carriages.

THE FIRE SIGNALS,

As sounded by the City Hall alarm bell, are as follows:

For the First District, 1 stroke of the bell.
Second " 2 strokes "
Third " 3 " "
Fourth " 4 " "
Fifth " 5 " "
Sixth " 6 " "
Seventh " 7 " "
Eighth " 8 " "

STATIONS OF FIRE ENGINE COMPANIES.

No. 1.—Hudson, 188 West Forty-seventh-st.
2.—Excelsior, 21 Henry-st.
3.—Metamora, 390 Bleecker-st.
4.—Niagara, 220 Mercer-st.
5.—Protection, 61 Ann-st.
6.—Americus, Henry-st., near Gouverneur.
7.—Lexington, Twenty-fifth-st., bet. Second and Third Avs.
8.—Manhattan, 91 Ludlow-st.
9.—Marion, 47 Marion-st.
11.—Oceanicus, 99 Wooster st.
12.—Knickerbocker, Fiftieth-st., near Lexington Av.
13.—Eagle, 5 Duane-st.
14.—Columbia, cor. Church and Vesey.
16.—Gotham, 126 West Broadway.
17.—East River, 38 Mangin-st.
19.—Lafayette, 199 Christie-st.
20.—Washington, 3 Temple-st.
21.—Fulton, Worth-st., near Broadway.
22.—Protector, cor. Center and Chambers-sts.
23.—United States, Twelfth-st., near Broadway.
24.—Jackson, Seventeenth-st., near Ninth Av.
25.—Cataract, 1006 Broadway.
26.—Jefferson, 83 Fifth-st.
27.—Fort Washington, Carmansville.
28.—Pacific, 377 Fourth Av.
—Guardian, 14 Amos-st.

32.—Bunker Hill, 101 Hester-st.
33.—Black Joke, Fifty-eighth-st., near Broadway.
34.—Howard, Christopher-st., near Hudson.
35.—Columbus, Third Av., near 121st-st.
36.—Equitable, Sixty-eighth-st., near Broadway.
37.—Tradesmen, Fifty-ninth-st., bet. Second and Third Avs.
38.—Southwark, 28 Ann-st.
39.—Franklin, Thirty-first-st., near Seventh Av.
40.—Lady Washington, Elm-st. near Broome.
41.—Clinton, Delancey-st., cor. Attorney.
42.—Empire, 2 Murray-st.
43.—Manhattan, Manhattanville.
44.—Live Oak, 92 Houston-st.
45.—Aurora, Yorkville.
47.—Aqueduct, Eighty-second-st., bet. Third and Fourth Avs.
48.—Mazeppa, Twenty-fourth-st., bet. Seventh and Eighth Avs.
49.—Pocahontas, 126th-st., bet. Third and Fourth Avs.
50.—Lone Star, 165 West Twentieth-st.
51.—Mutual, Twenty-second-st., near First Av.
Exempt Engine Co., 202 Center-st.

NEW YORK POST OFFICE.

Isaac V. Fowler, *Postmaster;* Principal Office in the Old Middle Dutch Church, on Nassau-st., between Cedar and Liberty-sts.

Office open, from April 1, to September 30, from 7.45 A. M. to 7 P. M. From October 1, to March 31, from 7.45 A.M. to 6.30 P.M. *Sundays* from 9 to 10, and from half-past 12 to half-past 1.

☞ Persons calling for letters that are advertised, are requested to ask for *Advertised Letters.*

LETTER POSTAGE.	*Prep'd.*	*Unp'd.*
For any distance not over 3000 miles (half ounce),	3 cts.	
Each additional half ounce,	3 "	
To California and Oregon (half ounce),	10 "	
Each additional half ounce,	10 "	
To or from Canada, not over 3000 miles, (half ounce),	10 "	10 cts.
Each additional half ounce,	10 "	10 "
Over 3000 miles (half ounce),	15 "	15 "
Each additional half ounce,	15 "	15 "

POSTAGE ON PRINTED MATTER.

Newspapers, Periodicals, Unsealed Circulars, &c. (except Books), to any part of U. S., for three ounces or less,	*One Cent.*
For each additional ounce,	*One Cent.*
Do.,	*not prepaid, double the above rates.*
Newspapers and Periodicals, circulated in the State where published, not over one and a half ounces,	*Half a*

Small Newspapers, published monthly or oftener, and Pamphlets of 16 pages or less, sent in packages to one address, eight ounces or less, *prepaid*,...........	*Four Cents.*
For each additional ounce,...........................	*Half a Cent.*
Books, bound or unbound, not over four pounds, under 3000 miles, per ounce, prepaid,.....................	*One Cent.*
Over 3000 miles, per ounce,..........................	*Two Cents.*
Books sent unpaid, *fifty per cent.* to be added to above rates.	

UNITED STATES ASSAY OFFICE,

30 WALL-STREET.

Established in 1855, with a capacity for assaying $40,000,000 per annum. Visitors are admitted on Wednesdays between 10 and 12 A. M.

Sam'l F. Butterworth, Sup. John Torry, Assayer.
Ed. M. Kent, Melter and Refiner. John J. Cisco, Treas.

CUSTOM HOUSE,

WALL AND PINE-STS., COR. NASSAU.
Open from 10 A. M. to 3 P. M.

Collector—Heman J. Redfield, Rotunda, Custom House.
Cashier—Wm. D. Robinson, 1st floor left, Pine-street entrance.
Naval Officer—J. R. Brodhead, 1st floor, right, Pine-street entrance.
Assis. U. S. Treas.—John J. Cisco, 30 Wall-street.
Auditor—Samuel G. Ogden, Jr., 2d floor, west side, Custom House.
Surveyor—John Cochrane, 30 Wall-street.
Inspector—J. L. Vanboskerck, 30 Wall-street.
Store Keeper—John H. Hunt, 3d floor, Custom House.
" —Daniel Green, 12 Broad-street.
Sample—Edgar Irving, 10 Broad-street.
Measurers—Basement, Custom House.
Weighers—Basement, Custom House.
Gaugers—Basement, Custom House.
Public Store—12 Broad-street.

THE MERCHANT'S EXCHANGE.

The Merchant's Exchange is a massive building, occupying the block bounded by Wall, Exchange-place, William and Hanover-streets. It is built of blue Quincy granite, and is 200 feet long by 171 to 144 feet wide, 77 feet high to the top of the cornice, and 124 to the top of the dome. The front is on Wall-street, and has a recessed portico of 18 heavy Grecian Ionic columns, 38 feet high and 4 ft. 4 in. in diameter, each formed from a solid block of stone, weighing 45 tons. Aside from numerous rooms for various purposes, the Merchant's Exchange has a rotunda in the center, 80 feet in diameter, with 4 recesses, making the length and breadth each 100 feet; the height of the Rotunda is 80 feet, and it is surmounted with a resting partly on eight Corinthian columns of Italian marble, igh, and lighted by a sky-light 25 feet in diameter.

RATES OF WHARFAGE OF THE PORT OF NEW YORK

AS ESTABLISHED AND REVISED BY THE LEGISLATURE.

For every vessel under 50 tons, . . .	$0 50	per day.
" " over 50 and under 100 tons	62½	"
" " " 100 " 150 "	75	"
" " " 150 " 200 "	87½	"
" " " 200 " 250 "	1	"
" " " 250 " 300 "	1 12½	"
" " " 300 " 350 "	1 25	"
" " " 350 " 400 "	1 87½	"
" " " 400 " 450 "	1 50	"
" " " 450 " 500 "	1 62½	"
" " " 500 " 550 "	1 75	"
" " " 550 " 600 "	1 87½	"

For every ship or vessel of 600 tons and upward, 12½ cts. in addition to the rate last mentioned ($1 87½cts.) for every day such ship or vessel shall use or be made fast to any of the wharves in New York; and "every ship or other vessel which shall make fast to any other ship or vessel that shall be fastened to any wharf, and being so fastened, shall load, unload, or careen, shall pay the one half of the rate of wharfage such ship or vessel would have been liable to pay if fastened to such wharf and there loaded, undloaded, or careened.

HACKNEY-COACH FARES

AS REGULATED BY CITY ORDINANCES.

Distances.	1 passenger.	Each additional pass'r.
Not exceeding 1 mile..........................	$0 50	37½
Exceeding 1 mile and not exceeding 2..........	75	37½
To the New Almshouse and returning	1 00	50
" Fortieth-st. & remain'g ½ an hour & return'g	1 50	50
" Sixty-first-st. " ¾ " "	2 00	50
" Eighty-sixth-st. " 1 " "	2 50	75
" Harlem " 3 " "	5 00	The same for one or more passengers.
" High Bridge " 3 " "	5 00	
" King's Bridge with privilege of staying all	5 00	
day	5 00	
For the use of a hackney-carriage by the day, with one or more passengers	5 00	
For the use of a hackney-coach or carriage by the hour, with one or more passengers, with the privilege of going from place to place, and stopping as often as may be required ..	1 00	per hour.

In all cases where the hiring of a hackney-coach or carriage is not at the time thereof specified to be by the day or hour, it shall be deemed to be by the mile.

For children between 2 and 14 years of age, half price only is to be charged; and for children under 2 years of age, no charge is to be made.

Whenever a hackney-coach or carriage shall be detained, excepting as aforesaid, the owner or driver shall be allowed after the rate of seventy-five cents an hour.

Every driver or owner of a hackney coach, carriage, or cab, in addition to the person or persons therein, shall carry and transport for each passenger one trunk, valise, saddle-bag, carpet-bag, portmanteau, or box, if he be requested so to do, and without extra charge; but for every trunk, etc., more than one for each passenger he shall be entitled to demand and receive the sum of six cents.

All complaints as to the infringement of the above rules to be made to the Mayor or Superintendent of Hackney Coaches and Carriages.

The penalty of ten dollars will be imposed on any driver who infringes the above rules.

RATES TO BE CHARGED BY CARTMEN.

APPROVED BY THE COMMON COUNCIL, DEC. 19, 1853.

The prices or rates to be taken or charged, for the loading, transportation, and unloading of goods, wares, or other articles, shall be as follows, to wit:

Oils, molasses, liquors, and all wet casks, containing less than 25 gallons, for every load,	$0	38
Of 25 gallons and under 50 gallons, for every four,		40
Of 50 gallons and under 100 gallons, for every two,		45
Of 100 gallons and under 150 gallons,		50
Sugars, tobacco, copperas, and all dry casks of under 1,000 lbs. weight, for every load,		38
Of 1,000 lbs. and under 1,500 lbs., each		45
Of 1,500 lbs. and under 2,000 lbs., each		50
Of 2,000 lbs. and upward, for every 100 lbs.,		5
And other ponderous articles of 1,000 lbs. weight and upward, at the same rate.		
Hay, loose, per load,	$1	00
Bricks, when handled and piled, per load,		40
Hoop-poles, loose, per load,		50
Timber and lumber, per load,		35
Hemp, loose, for every 1,200 lbs.,		50
Beef and pork, for every 5 barrels,		38
Calves, sheep, and lambs, per load,		35
Coal, per ton,		50
Coal, per half chaldron,		40
Cotton, for every 3 bales,		38
Earthenware, loose, per load,		40
Oil floor cloths, in boxes or rolls of less than 15 feet in length, load,		38

Of 10 feet and less than 15 feet do. each,	$0 50
Of 15 feet " 20 feet "	50
Of 20 feet " 24 feet "	65
Of 24 feet and upward, as may be agreed on.	
Plaster of Paris, loose, per ton,	65
Salt, for every 20 bushels,	33
Cut stone, per load,	35
Slate or tile, per load,	35
Household furniture, loose, per load	50
For loading, unloading, and housing furniture, in the removal of families, extra, per load,	50
Bedding, tied up, chests, trunks, and boxes, per load,	38
Cassia, in mats, per 100 mats,	25
Anchors of under 300 lbs. weight, per load,	38
Anchors of 300 lbs. weight and upward, per 100 lbs.,	40
Chain cables of under 1,000 lbs. weight, per load of 1,000 lbs. weight and upward, per 100 lbs.,	5
Iron hollow ware, per load,	40
Iron and steel, per load,	45
Fish, dry, per load,	50
And for every load of goods, wares, merchandise, or other things not enumerated,	38

Provided, that when the distance exceeds half a mile and is within a mile, one third more shall be added to the above rates and prices, and in the same proportion for any greater distance. And if any public cartman shall ask, demand, receive, take, exact, or extort, any greater rate, price, pay, or compensation, for carting or transporting any article or thing whatsoever than is mentioned, allowed, expressed, and limited as aforesaid, it shall not be lawful for him to receive any compensation for the said carting or transportation; and the such asking or receiving shall be deemed a violation of this ordinance.

It shall not be lawful for any public cartman to neglect or refuse to carry and transport a good and sufficient load, as much as can be conveniently and safely stowed on his cart, or is reasonable for one horse to draw, nor any article of less than 2,000 pounds' weight, when required so to do, unless he be then actually otherwise employed; and every public cartman and public porter shall be entitled to be paid the legal rate or compensation allowed and provided in this ordinance, immediately upon the carting or transportation of any article or thing; and it may be lawful for any such public cartman or public porter, to retain any article or thing so carted or transported by him, for which he is not so paid his cartage, and to convey the same without delay to the office of the Chief of Police, and he shall be entitled to the lawful rate of pay or compensation for the so conveying. All disputes or disagreements as to distance or rates of compensation between public cartmen and public porters, and persons employing or owing them for cartage or transportation, shall determined by the mayor.

It shall not be lawful for any public cartman, or any other p to cart or transport through any of the streets of said city, any poles, plank, spars, timber, or other thing exceeding thirty feet in length, except on a suitable truck or other vehicle, and such plank or other thing be placed lengthwise thereon, so as not to project at either end beyond the line of the side, or width, of such truck or other vehicle; and all persons so carting or transporting any such poles, plank, timber, spars, or other things, in any other manner, shall be deemed guilty of a violation of this article.

It shall not be lawful for the driver, or other person having charge of any public cart, dirt cart, or any other vehicle, to be off, or away from any such cart, or any other vehicle, while the same is moving or passing along any of the streets or avenues of said city; nor shall it be lawful for any public cartman, while waiting for employment at any place assigned for his cart to stand waiting for employment, or at any other place, to snap or flourish his whip, or to be away from his cart, unless from necessity or on business, or to set or stand about the door-steps or platforms in front of any house, store, or other building, to the annoyance of the occupants thereof.

It shall not be lawful for any person, who has been licensed to keep public carts, or to be a public cartman, and whose license has been suspended or revoked by the mayor, to keep, drive, or use any public cart in the city of New York, under the penalty of twenty-five dollars for every such offense.

The stanchions of every public cart employed in the transportation of any fire-wood, shall be shouldered with a band of iron around the part which enters the mortice, and the mortice cased with iron, so as to prevent the wearing of the stanchion or mortice; and at least three feet distant from the floor of the cart, there shall be fixed across from one stanchion to the other, an iron chain, so as to prevent the stanchion from spreading; and no public cartman shall cart any fire-wood in violation of any of these provisions.

It shall not be lawful for any person to keep, drive, use, or employ, any cart, wagon, truck, dray, or other vehicle, other than such as are licensed as herein provided, for the transportation or conveyance of any article or thing, from place to place in the city of New York, unless the name and residence or place of business, where such owner can be found [of the owner thereof], be fairly and distinctly painted with red paint, on a white ground, in plain letters and figures, at least two and a half inches long, in a conspicuous place, on both sides of such cart or other vehicle, so as at all times to be easily seen thereon.

LAW TO REGULATE PUBLIC PORTERS.

§ 1. The mayor shall license and appoint as many and such persons as he may think expedient to be Public Porters of the City of New York, and revoke or suspend any or all of such licenses at his pleasure; and it shall not be lawful for any person to use any wheel-barrow or hand-cart, to carry, transport, or convey baggage, or other things from place to place within said city, for hire, wages, or pay for such conveyance, or to be at any hotel, boarding-house, ferry, steamboat landing, railroad station or dôpôt, and solicit of strangers, travelers, citizens, or other persons, or accept the conveyance of baggage or other articles, without being licensed as aforesaid by the mayor.

This section shall not be construed to prevent any person keeping, or employed in, any hotel or boarding-house, from conveying any baggage to or from such hotel or boarding-house, and using a hand-cart or wheel-barrow therefor; provided, the name of the hotel or boarding-house, and the keeper thereof, be painted distinctly on both sides of such wheel-barrow or hand-cart, and on a badge worn on the front of his hat or cap, so as to be easily and distinctly seen.

§ 2. All licenses to public porters, granted as aforesaid, shall run one year from the date thereof; and may be renewed by the mayor at any time within the said year, for a succeeding year.

§ 3. Every person receiving a license to be a public porter, as aforesaid, shall pay to the mayor, for the use of the city, one dollar, and a further sum of twenty-five cents upon the renewal of every such license.

§ 4. Every public porter shall wear, in a conspicuous place upon his person, so as to be easily seen, a brass plate or badge, on which shall be engraved his name, the words "Public Porter," and the number of his license; and it shall be unlawful for any other person to wear or exhibit any badge purporting to be, resembling, or similar to, the badge of a public porter; and no public porter shall permit any other person to wear his badge or use his name in any way whatever, in the transportation or conveyance of any thing.

§ 5. Public porters shall be entitled to charge and receive for the carriage or conveyance of any article, any distance within half a mile, twelve cents, if carried by hand, and twenty-five cents, if carried on a wheel-barrow or hand-cart; if the distance exceeds half a mile and is within a mile, one half of the above rates in addition thereto; and in the same proportion for any greater distance.

§ 6. If any public porter shall ask or demand any greater rate of pay or compensation for the carrying or conveyance of any articles than is herein provided, he shall not be entitled to any pay for the said service; and so to ask, demand, or receive any such greater pay or compensation, shall be deemed a violation of this ordinance.

§ 7. It shall not be lawful for any person to represent himself as, or to wear or exhibit any badge, inscription, card or device purporting or implying that he is employed or authorized by the keeper, proprietors, agent, or officer of any hotel, boarding-house, vessel, steamboat, or railway company, to solicit, recive, or convey persons, baggage, or other things to or from any such hotel, boarding-house, vessel, steamboat, or railroad company's station or dôpôt, without being actually and duly authorized by such keeper, proprietor, officer, or agent so to do, under the penalty of twenty-five dollars for every offense.

All persons who shall violate or fail to comply with any of the provisions of this ordinance, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished, pursuant to provisions of sections 20 and 21 of an act relative to the powers of the Common Council of the City of New York and the criminal courts of said city, passed by the Legislature of the State of New York, January 23d, 1833, or in lieu thereof, shall forfeit and pay, for the use of said city, ten dollars for each and every offense, except where a penalty is prescribed in said ordinance.

All ordinances and parts of ordinances conflicting herewith, are hereby repealed.

Adopted by the Board of Aldermen, 28th May, 1851.
Concurred in by the Board of Assistants, 31st May, 1851.
Approved by the mayor, 2d June, 1851.
Amended as to Rates, 19th December, 1853.

LOCATION OF PIERS IN THE CITY OF NEW YORK.

EAST RIVER.

No. 1, 2, foot Whitehall.
“ 3, “ Moore.
“ 4, bet. Moore and Broad.
“ 5, bet. Broad and Coenties Slip.
“ 6, 7, 8, Coenties Slip.
“ 9, 10, bet. Coenties and Old Slips.
“ 11, 12, Old Slip.
“ 13, bet. Old Slip and Gouverneur's Landing.
“ 14, foot Jones' Lane.
“ 15, 16, foot Wall.
“ 17, foot Pine.
“ 18, foot Maiden Lane.
“ 19, “ Fletcher.
“ 20, 21, foot Burling Slip.
“ 22, “ Fulton.
“ 23, “ Beekman.
“ 24, bet. Beekman and Peck Slip.
“ 25, 26, foot Peck Slip.
“ 27, “ Dover.
“ 28, bet. Dover and Roosevelt.
“ 29, foot Roosevelt.
“ 30, bet. Roosevelt and James.
“ 31, 32, foot James' Slip.
No. 33, foot Oliver.
“ 34, 35, foot Catharine.
“ 36, bet. Catharine and Market.
“ 37, 38, foot of Market.
“ 39, bet. Market and Pike.
“ 40, 41, foot Pike.
“ 42, bet. Pike and Rutgers.
“ 43, 44, foot Rutgers.
“ 45, bet. Rutgers and Jefferson.
“ 46, foot Jefferson.
“ 47, bet. Jefferson and Clinton.
“ 48, foot Clinton.
“ 49, bet. Clinton and Montgomery.
“ 50, foot Montgomery.
“ 51, ———
“ 52, 53, foot Gouverneur.
“ 54, foot Jackson.
“ 55, “ Cherry.
“ 56, 57, foot Broome.
“ 58, 59, Delancey.
“ 60, bet. Rivington and Stanton.
“ 61, foot Stanton.

NORTH RIVER.

No. 1, foot Battery pl.
" 2, 3, bet. Battery pl. and Morris.
" 4, foot Morris.
" 5, 6, 7, bet. Morris and Rector.
" 8, foot Rector.
" 9, 10, bet. Rector and Carlisle.
" 11, foot Carlisle.
" 12, " Albany.
" 13, bet. Albany and Cedar.
" 14, foot Cedar.
" 15, " Liberty.
" 16, bet. Liberty and Courtlandt.
" 17, 18, foot Courtlandt.
" 19, bet. Courtlandt and Dey.
" 20, foot Dey.
" 21, " Fulton.
" 22, 23, 24, bet. Fulton and Vesey.
" 25, foot Vesey.
" 26, bet. Vesey and Barclay.
" 27, foot Robinson.
" 28, " Murray.
" 29, " Warren.
No. 30, foot Chambers.
" 31, " Duane.
" 32, bet. Duane and Jay.
" 33, foot Jay.
" 34, " Harrison.
" 35, " Franklin.
" 36, " North Moore.
" 37, " Beach.
" 38, " Hubert.
" 39, " Vestry.
" 40, " Watts.
" 41, " Canal.
" 42, " Spring.
" 43, 44, bet. Spring and Charlton.
" 45, foot Charlton.
" 46, " King.
" 47, " Hammersley.
" 48, " Clarkson.
" 49, " Leroy.
" 50, " Morton.
" 51, " Christopher.
" 52, " Amos.
" 53, " Charles.
" 54, " Perry.
" 55, " Hammond.
" 56, " Bank.

NATURALIZATION.

In order for a free white person, born in a foreign country, to become a citizen of the United States, it is necessary that he should make a declaration under oath, at least two years before his admission, of his intention to become a citizen, and must renounce his allegiance to his own sovereign. This declaration must be made before—

1. Any State court, being a court of record, and having a seal and clerk, and common-law jurisdiction.
2. Before a circuit court of the United States.
3. Before a district court of the United States.
4. Before a clerk of either of these courts.

After he has been a resident of the United States for five years, and has made his declaration of intentions at least two years before, he may then be admitted to the rights of citizenship. In order for this, he must prove, by the oath of two citizens of the United States, that he has been a resident of the United States for five years, and one year within the State where the court is held.

He must also take an oath to support the Constitution of the

United States, and on oath renounce and abjure his native allegiance.

If he have been a minor, and shall have resided in the United States for three years next before attaining his majority, he may be admitted without such declaration, on proving by two witnesses that he has resided five years in the United States, three years as a minor and two since he became of age, making the declaration of his intention at the time of his admission, and declaring on oath, and proving to the satisfaction of the court, that for three years next preceding it had been his *bona fide* intention to become a citizen.

The alien's country must, at the time of his admission, be at peace with the United States.

If an alien die after having made his declaration of intention and before his admission, his widow and children are citizens.

The minor children of any one duly naturalized, if dwelling in the United States, are citizens.

RAILROADS IN THE UNITED STATES.

According to Dinsmore's "Railway Guide" for January, 1856, the following was the comparative length of railroads in the various States, in 1855 and 1856 :—

	1855. Miles.	1856. Miles.	Inc. Miles.		1855. Miles.	1856. Miles.	Inc. Miles.
Maine.........	407	494	87	Alabama.....	802	467	165
New Hamp're.	649	660	11	Mississippi...	159	296	187
Vermont......	516	516	—	Louisiana....	178	337	164
Massachusetts.	1,317	1,409	92	Texas........	36	36	—
Rhode Island..	106	145	39	Arkansas.....	—	37	37
Connecticut...	632	699	67	Tennessee....	317	455	138
New York	2,692	2,794	102	Kentucky....	192	284	92
New Jersey...	411	504	93	Ohio.........	2,427	2,725	298
Pennsylvania..	1,127	1,746	119	Indiana......	1,482	1,789	307
Delaware	49	86	37	Michigan.....	527	590	63
Maryland	412	466	57	Illinois.......	1,892	2,215	323
Virginia.......	1,122	1,295	173	Wisconsin....	195	647	272
North Carolina	403	631	228	Missouri	87	189	102
South Carolina	755	846	91	Iowa.........	—	67	67
Georgia.......	971	1,013	42	California....	—	8	8
Florida.......	26	26	—	Total.....	19,834	23,242	3,403

The following table exhibits the progressive annual increase of the miles of railway in the United States since the year 1828 :—

Years.	Miles.	Years.	Miles.	Years.	Miles.	Years.	Miles.	Years.	Miles.
1828...	8	1834...	762	1840...	2,167	1846...	4,870	1852...	11,631
1829...	28	1835...	918	1841...	3,319	1847...	5,336	1853...	13,379
1830...	41	1836...	1,102	1842...	3,877	1848...	5,682	1854...	16,928
1831...	54	1837...	1,421	1843...	4,174	1849...	6,350	1855...	19,834
[illegible]	131	1838...	1,843	1844...	4,311	1850...	7,355	1856...	23,242
[illegible]	776	1839...	1,920	1845...	4,511	1851...	9,090		

CHRONOLOGICAL HISTORY OF AMERICA FROM 1492 TO 1856.

1492.—Discovery of America by Columbus.

1493.—Second voyage of Columbus. The cotton tree-found to be indigenous to the soil.

1497.—St. John's (Prince Edward's) Island discovered by Sebastian Cabot, June 24; he also discovers Florida.

1498.—Third voyage of Columbus. The Western Continent discovered, August 2.

1499.—Canada discovered by John and Sebastian Cabot.

1502.—Fourth voyage of Columbus. He suffers shipwreck on the Island of Jamaica.

1506.—Death of Columbus at Valladolid, in Spain, May 20, aged 58.

1512.—Florida explored by Ponce de Leon.

1534.—Lower California discovered by Grigalon, a Spaniard, from Mexico.

The coast of Newfoundland visited by the French navigator, Jacques Cartier. He enters the Gulf, and calls it the St. Lawrence.

1550.—Carolina discovered by Sebastian Cabot.

1562.—French expedition under Jean de Ribaud; colony of Fort Charles in Florida.

1563.—The French colonists abandon Florida.

1584.—Captains Amadas and Barlow (England) visit Virginia, and discover Roanoke.

1585.—First English settlement in America; Roanoke, in Virginia, planted by Sir Richard Grenville.

Davis's Straits discovered by Sir G. Davis.

1586.—Ruin of the English colony at Roanoke.

1587.—Grenville's second colony at Roanoke.

1590.—Governor White visits Roanoke; he finds the colony completely exterminated.

1596.—Upper California discovered by Drake.

1602.—Bartholomew Gosnold arrives in the Bay of Massachusetts from Dartmouth, England; discovering, on his way, two islands, which he named Martha's Vineyard and Elizabeth. Cape Cod also discovered and so named by Gosnold. This was the first spot in New England ever trod by an Englishman.

1607.—Jamestown founded—the first permanent English settlement in America.

1608.—Chesapeake Bay explored and mapped by Captain J. Smith.

1609.—Hudson, and a mixed crew of Hollanders and Englishmen, sail in the *Half-moon* from Amsterdam to America, April 4. He discovers the Bay of New York, and explores the river which bears his name.

1610.—First Dutch colony on the shores of the Hudson.

1615.—Albany, on the Hudson, founded.

1619.—First Colonial Assembly in Virginia, convened in Jamestown in June, consisting of the governor, council, and two representatives from the eleven boroughs.

1620.—Slavery introduced into Virginia. The Pilgrim Fathers land at Plymouth Rock, 11th December, from the *Mayflower*.

1621.—Cotton first cultivated in Virginia.

1622.—Massacre of Jamestown.

1623.—New Hampshire settled by colonies of English Puritans.

1624.—Permanent settlement of New York, called New Amsterdam, by the Dutch.

1630.—Winthrop's party arrive in New England in June and July.

1632.—English settlement at Montserrat, Maryland.

1634.—Maryland colonized by Catholics; religious toleration the basis of legislation.

1636.—Providence, Rhode Island, founded in June by Roger Williams and five companions, "as a shelter for persons distressed for conscience."

1637.—Religious persecution in New England; expulsion of Anne Hutchinson and others from Boston for opposition to the clergy.

1638.—Harvard College founded.

1641.—Democratic form of government in Rhode Island.

1643.—Massachusetts, Plymouth, Connecticut, and New Haven confederate under the title of "The United Colonies of New England."

1656.—Quakers first seen in America; Mary Fisher and Ann Austin arrive in Boston; they are sent back to England.

1657.—Persecution of the Quakers in New England; arrival of Mary Dyar, and Ann Burden, and "swarms of the cursed sect."

1658.—Banishment of Quakers on pain of death, decreed by the Massachusetts government.

William Robinson, Marmaduke Stephenson, Nicholas Davis, Mary Dyar, and William Leddra, Quakers, are hanged at Boston for heresy.

1663.—The English colonies in America are compelled by a new navigation law to purchase only in England. Great dissatisfaction is expressed.

1664.—New Jersey settled by the English; Eliot's Indian Bible published at Cambridge: one of the first books printed in North America.

1667.—Settlement of Carolina by a body of Englishmen.

1672.—The river Mississippi discovered by Father Marquette and M. Jolliet, a merchant.

1677.—Massachusetts denies England's right to tax, enact laws, or perform any other act of sovereignty.

1682.—Louisiana explored and named by the French.

1682.—Philadelphia founded by Penn.

1684.—The Charter of Massachusetts granted by James I., withdrawn by Charles II.

1692.—The witchcraft mania prevails in New England; 20 persons are hanged, 55 tortured, and large numbers imprisoned.

1699.—French colony settle in Louisiana; the Mississippi first entered from the sea by French vessels of war.

1700.—The Mississippi first settled by the French under Bienville and Touti; they found the town of Rosalia, now called Natchez.

Yale College founded.

1704.—The first American newspaper, the Boston *News Letter*, commenced.

1717.—New Orleans settled by the French.

1732.—Birth of George Washington.

1733.—First Free Masons' Lodge opened in Boston.

1740.—Tennessee first explored.

1753.—The hostilities which, from time to time, took place between the Virginians and the French, and their Indian allies, now assume a very dangerous aspect, and open war prevails.

1754.—Victory of Major Washington over the French.

Aggressions of French colonists on the English territory in North America; hence

Albany conference, respecting them.

Colonel Washington defeated by the French at Fort du Quesne, Ohio.

Colonel Monkton's expedition from New England against the Acadians.

Victory over the French at Beau-Sejour.

The Acadians (20,000) driven from their homesteads and sent to southern settlements by the British authorities. This event is beautifully and graphically described in Longfellow's poem of "Evangeline."

Columbia College, New York, founded.

1755.—The University of Pennsylvania founded.

War between the English and French in America; Oswego and Granby taken by the French; Canada invaded by the English.

1757.—Fort George reduced by Montcalm; massacre of 2,000 English by the Indians.

1758.—Abercrombie repulsed at Ticonderoga.

Cape Breton surrendered to the English July 26th.

Fort du Quesne conquered by the English.

1759.—Siege of Quebec; death of General Wolfe; Quebec surrendered to Murray; death of the brave Marquis de Montcalm.

Battle of Sillery; Ticonderoga, Crown Point, and Niagara reduced by the English.

Montreal surrendered to the English.

1760.—Conquest of Canada by the English.

1762.—Yellow fever rages in Philadelphia.

1763.—Termination of the "Old French War;" mutual concessions of American territory made by France and England.

1764.—Discontent in the British colonies occasioned by the levying of taxes on all articles imported from the West Indian Islands.
Brown University founded.

1765.—Great dissatisfaction in the colonies occasioned by the "Stamp Act."
Assembly in Virginia; the right of England to tax the colonies denied, May.
First Colonial Congress in New York; the Americans resolve not to use British goods until the Stamp Act is repealed.

1766.—Stamp Act repealed, but the right to tax the Colonies maintained.

1768.—Boston occupied by British troops.

1769.—Dartmouth College, New Haven, founded.

1770.—Riots in Boston; the British garrison fire on the people.
Rutgers' College, New Brunswick, founded.

1773.—Resistance to the Tea Tax in Boston.
The celebrated "Tea-party."

1774.—The port of Boston closed by order of the English Government.
First meeting of the American Congress, held at Philadelphia, 51 present. Declaration of Rights passed unanimously.

1775.—First engagement between the Americans and English; the battle of Lexington, April 19th.
Battle of Bunker Hill, June 7th.

1776.—DECLARATION OF INDEPENDENCE, JULY 4th.
The French espouse the American cause.
Battle of Flatbush; the Americans under Sullivan defeated, August 27th.
Entry of British troops into New York, which they occupy, September 15th.
Battles of White Plains, October 28th and November 30th; Americans defeated.
Battle of Trenton; Washington makes prisoners of 1,000 Hessians.

1777.—Battle of Princeton, January 2.
Marquis de la Fayette lands in America, April 25th.
Ticonderoga captured by the British, July 5th.
Battle of Bennington, August 16th.
Battle of Brandywine; the Americans routed; hence Philadelphia falls to the British, September 11th.
Battle of Plattsburg, September 11th. Battle of Stillwater, September 12th. Battle of Germantown, October 4th.
Articles of Confederation adopted by Thirteen of the Colonies, October 4th; signed, November 15th.
The British army, under Burgoyne, surrenders to General Gates, at Saratoga, October 17th.

1778.—Alliance between France and America.

The proposals of the English Commissioners rejected by Congress, who refuse to treat as subjects of Great Britain.

British troops evacuate Philadelphia, June 18th.

Battle of Monmouth; Washington victorious, June 18th.

1779.—Norfolk burned by the British, June. Norwalk burned by the British, August 22. Stonypoint taken by the Americans under General Wayne.

Victory of Paul Jones off Scotland.

1780.—Major André hanged as a spy, October 2.

French auxiliary forces land.

Charleston taken by the British, May 12th.

General Gates defeated by Lord Cornwallis, August 15th.

Battle of Camden—Americans defeated and De Kalb killed, August 16th.

Treason of Arnold discovered.

1781.—Battle of Cowpens; Morgan victorious. Battle of Camden. Camden burned by the English, May 18th.

Battle of Yorktown, and surrender of the British army under Lord Cornwallis.

1782.—Treaty with Holland.

1783.—Peace of Versailles, and recognition by Great Britain of the Independence of the United States.

Slavery abolished in Massachusetts.

Washington resigns the command of the American army and retires into private life, December 4th.

1784.—New York Chamber of Commerce founded.

1785.—John Adams, the first embassador from the United States to England.

1787.—General States' Convention at Philadelphia, and adoption of the Federal Constitution of the United States.

1788.—The Quakers of Pennsylvania liberate their slaves, and establish schools for their use.

Cotton first planted in Georgia.

New Orleans destroyed by fire.

1789.—The Constitution accepted by all the States, and election of George Washington first President, April 30th;

John Adams, Vice President.

1791.—First United States' Bank; capital $10,000,000.

Vermont added to the Union.

The militia system organized.

Yellow fever rages in New York, August.

1792.—Kentucky admitted into the Union.

United States' Mint established.

1793.—George Washington re-elected President.

1794.—American navy commenced; six frigates built to operate against the Algerines.

Treaty of Commerce with Great Britain, effected by Mr. Jay, November 19th.

1796.—Tennessee received into the Union as a Territory.

General seizure of American vessels by order of the French Executive Directory.

1797.—John Adams second President of the United States; Thomas Jefferson, Vice President.

1798.—Commissions of reprisal issued against France, and active preparations for war. Organization of a regular army; George Washington Commander-in-chief.

1799.—Tennessee admitted into the Union.

Death of Washington, December 14th.

1800.—Treaty of Commerce with France.

Seat of Government transferred from Philadelphia to Washington.

Louisiana again in the hands of the French.

1801.—Thomas Jefferson, third President of the United States.

Census of the Union, 5,300,000; number of slaves, 896,849.

Act of Congress forbidding citizens holding property in foreign slaves, and giving authority to U. S. vessels to capture slave vessels.

1802.—Ohio (76,000 inhabitants) joins the Union.

1803.—Louisiana sold by France to the U. S. for $15,000,000.

Capture of the U. S. frigate *Philadelphia* by the Tripolitans.

War declared against the Bey of Tripoli.

1804.—The *Philadelphia* recaptured by Decatur.

Murder of Hamilton by Aaron Burr.

Expedition of Preble to Tripoli, which he bombards.

1805.—Thomas Jefferson re-elected Pres.; George Clinton, V. P.

Disputes with England arising from the capture and condemnation of several American vessels about to enter blockaded ports, and from the assumption by England of the "right of search."

1806.—Disputes settled by treaty.

1807.—The President rejects the Monroe Treaty.

Assertion of the right of search by Great Britain; the American ship *Chesapeake* fired into by a British ship-of-war, June 23.

Fulton's first successful trial of steam power on the Hudson; he performs the passage from New York to Albany in 32 hours.

American Embargo Act, Dec. 22.

1808.—Slave-trade abolished by Congress.

1809.—Non-intercourse act with Britain, March 1.

Embargo on British ships repealed, June 10, in consequence of Mr. Erskine's arrangement with the American cabinet.

Mr. Erskine's arrangement disavowed by the English Government, consequently,

Renewal of the non-intercourse law against England, Aug. 2.

James Madison, fourth Pres. U. S.

1810.—Intercourse with France, and admission of French and English ships into American ports.

1810.—Census of the U. S.: whites, 7,239,903; slaves, 1,191,364.

1811.—Non-intercourse act against Britain, March 2.
Encounter between the English sloop-of-war *Little Belt*, and the American frigate *President*.

1812.—Embargo for ninety days on Eng. shipping, commenced April.
War declared against England, June 18.
American army under Hull invade Canada.
Battle of Brownstown, Americans defeated, Aug. 8.
The Americans in Canada, under Hull, surrender at Detroit, August 16.
Capture of the *Guerriere* by the American ship *Constitution*, August 19.
The Chesapeake and Delaware blockaded by an English fleet.
Battle of Queenstown, General Wool victorious, Aug. 12, 13.
Capture of the *Frolic* by Captain Jones, commander of the *Wasp*, Oct. 18.
Capture of the British frigate *Macedonian* by Captain Decatur of the *United States*, Oct. 25.
Capture of the British frigate *Java* by Bainbridge of the *Constitution*, Dec. 29.
Louisiana admitted into the Union.

1813.—The Legislature of Massachusetts remonstrates against the war. June.
Perry's victory on Lake Erie; defeat of the British flotilla.
Battle of Frenchtown, Jan. 22; of Ogdensburg, Feb. 22; of Craney Island, June 3; of Eastport, in July; of Fort Niagara, Nov. 11; of Blackrock, Dec. 3.

1814.—Fort Erie taken by the Americans, July 3.
Battle of the Chippewa, English defeated, July 5 and 25.
Battle of Bridgewater, July 25; of Fort Erie, Aug. 15.
A British flotilla ascends the Connecticut and destroys twenty-five vessels.
City of Washington burned by the British, Aug. 24.
Capture of Alexandria.
Battle of Bellair, Aug. 30; the British defeated, and General Parker killed.
British repulsed on Lake Champlain, Sept. 11.
British repulsed at Baltimore, Sept. 12; Battle of Fort McHenry, Oct. 13.
Pensacola taken by General Jackson, Nov. 20.
The Hartford Convention oppose the war, Dec. 15.
Peace concluded between England and the United States, at Ghent, Dec. 24; conquests mutually restored.

1815.—Battle of New Orleans—intelligence of peace not having arrived.
Ratification of the peace of Ghent, Feb. 17.
War declared against Algiers.
The Algerine admiral captured by an American squadron; the Dey makes peace on terms advantageous to America July 4.

1816.—Incorporation of the U. S. Bank; capital, $35,000,000; second charter for twenty years.
Indiana admitted into the Union.
1817.—James Monroe, fifth Pres. U. S.
Mississippi received into the Union.
1818.—The State of Illinois admitted.
First passage of the Atlantic by steam.
New York State abolishes imprisonment for debt.
1819.—Alabama received into the Union.
The Floridas purchased from Spain.
1820.—Maine admitted into the Union.
1821.—James Monroe re-elected President.
Cession of Florida to the United States.
Missouri received into the Union.
The remains of Major André transferred from America to Westminster, Aug. 10.
1822.—First cotton-factory at Lowell erected.
1823.—The American Union resolves to acknowledge the Republics of South America.
1824.—Treaty with Great Briitain for the suppression of the slave-trade, March 13th.
Visit of La Fayette to the United States; he is voted a township by Congress, also $200,000.
Opening of the Erie Canal.
1825.—J. Quincy Adams, sixth president United States.
1826.—Treaty with the Creeks; they cede their lands in Georgia to the United States—one tribe excepted.
1828.—Noah Webster's Dictionary first published.
1829.—Andrew Jackson, seventh president United States.
1830.—Census of the Union; free men, 12,586,171; slaves, 2,010,436.
1831.—Great agitation on the free trade policy, and the protection system in the United States.
1832.—The United States Bank question; the president vetoes the motion for renewing its charter. The House of Representatives are against the renewal; the Senate for it.
Great commercial panic; failure of 96 local banks.
1833.—Andrew Jackson re-elected president.
The United States deposits removed from the bank.
1834.—Censure on the president for removing the deposits.
1835.—Great fire in New York December 3d, loss $20,000,000.
1836.—The States of Arkansas and Michigan admitted into the Union.
James Smithson, of London, bequeaths $100,000 for establishing an institution in America, "for the increase and diffusion of knowledge among men."
1837.—Martin Van Buren, eighth president.
Suspension of specie payment by the banks, May; commercial panic and distress.
Morse patents his electro-magnetic telegraph.

1838.—Commercial confidence restored; the banks resume payment.

1839.—Final suspension of payment by the United States Bank.

1840.—Census; whites, 14,575,311; slaves, 2,487,355.

1841.—Bankruptcy of the United States Bank announced.

W. H. Harrison, ninth president United States.

Death of the president, just one month after his inauguration.

John Tyler, tenth president.

1842.—Croton aqueduct completed.

1844.—Texas annexed to the Union.

Anti-rent riots in New York.

The first line of telegraph constructed in America from Washington to Baltimore.

1845.—James K. Polk, eleventh president.

The Oregon question assumes a threatening aspect.

1846.—War between Mexico and the United States.

An army of occupation under General Taylor assemble on the Rio Grande, March 28th.

Hostilities commenced on the Rio Grande by Col. Thornton, April 24th

Battle of Palo Alto; General Taylor defeats the Mexicans, May 8, 9.

Battle of Resaca de la Palma, May 9th.

The Oregon question settled by treaty.

San Francisco seized by Commodores Sloat and Montgomery, United States Navy, July 6–8, and annexed.

General Kearney occupies Santa Fé, August 18th

Battle of Monterey; Taylor and 4,700 Americans, against Ampudia with 10,000 Mexicans, September 21–23; followed by surrender of Monterey.

Perry bombards Tobasco October 25th.

Tampico occupied by Commodore Connor, November 14th.

Iowa admitted into the Union.

Ether first used for surgical purposes by Doctor Wells of Connecticut, and Doctor Jackson of Boston.

1847.—Victory of General Kearney at San Gabriel, January 7, 8.

Battle of Buena Vista; the Americans under Taylor and Wool (4,769) defeat Santa Anna and 22,000 Mexicans.

Battle of Sacramento, February 26th.

Capitulation of Vera Cruz to General Scott and Commodore Perry, March 29th.

Surrender of Alvarado, April 2d.

Battle of Cerro Gordo; Scott defeats Santa Anna April 13th; takes 6,000 prisoners.

Commodore Perry takes Tuspan, April 18th.

Battle of Contreras and Cherubusco; General Smith victorious, August 20th.

Armistice, August 24th.

Renewal of hostilities by Mexicans, September 7th.

Battle of Molino del Rey; Worth defeats Santa Anna, Dec. 8th.
Battle of Chapultepec; Scott victorious, September 12th.
Surrender of the City of Mexico, September 15th.
Attack on Puebla by the Mexicans; repulsed by Colonel Child, October 12th.
Lane defeats Santa Anna, and takes the City of Huamaulla, October 9th.
Bombardment and capture of the port of Guayamas, Oct. 20th.
Annexation of part of Mexico to the United States.
Gold dust discovered in California.
1848.—The Girard University opened.
Peace between the United States and Mexico.
United States army withdrawn from the City of Mexico, June 12th.
1849.—Zachary Taylor, twelfth president United States.
Macready riots at the Astor Place Opera House.
Constitution adopted for California.
1850.—The town of Sacramento destroyed by a flood, Jan. 7-15th.
Unsuccessful enterprise against Cuba by General Lopez.
Death of General Taylor, and Millard Fillmore appointed thirteenth president.
California joins the Union, the thirty-first State.
Texas boundary question settled by the payment of $10,000-000 to Texas.
Territories of New Mexico and Utah admitted.
Fugitive Slave Law passed.
1851.—Second invasion of Cuba by Lopez, August 12th; defeated; fifty of the party shot.
Lopez garroted at Havana, September 1st.
1852.—General Franklin Pierce elected fourteenth president of the United States.
1853.—Opening of the "Exhibition of the Industry of all Nations," New York, July 14th.
1854.—Anti-slavery riot in Boston.
Commercial Reciprocity Act passed between British North America and the United States, June 7th.
The Nebraska Bill passed, July.
Greytown bombarded and destroyed by Captain Hollins.
1856.—Election of James Buchanan, fifteenth president of the United States.

The authorised strength of the United States army is 17,867, officers and men; the actual strength, 15,752. The number of enlistments for the year ending September 20, 1855, was 10,546; loss by deaths, discharges, and desertions, 5,500. The whole territory of the United States is divided into 5 great departments, in which there are 26 -als and 98 forts, most of which are garrisoned.

PRESIDENTS AND VICE-PRESIDENTS OF THE UNITED STATES,

FROM THE ADOPTION OF THE CONSTITUTION TO THE PRESENT TIME.

No.	PRESIDENTS.	Residence.	Born.	Age at that time.	Years in the office.	Died.	Age at his death.	VICE-PRESIDENTS.	Installed into office
1	George Washington	Virginia..	1732	57	8	Dec. 14, 1799	68	John Adams........	1789
2	George Washington							John Adams.........	1793
3	John Adams	Mass......	1735	62	4	July 4, 1826	91	Thomas Jefferson....	1797
4	Thomas Jefferson...	Virginia..	1743	58	8	July 4, 1826	83	Aaron Burr..........	1801
5	Thomas Jefferson...							George Clinton.......	1805
6	James Madison.....	Virginia..	1751	58	8	June 28, 1836	85	George Clinton†.....	1809
7	James Madison.....							Elbridge Gerry†.....	1813
8	James Monroe	Virginia..	1758	58	8	July 4, 1831	72	Daniel D. Tompkins.	1817
9	James Monroe							Daniel D. Tompkins.	1821
10	John Q. Adams	Mass......	1767	58	4	Feb. 23, 1848	80	John C. Calhoun....	1825
11	Andrew Jackson ...	Tennessee	1767	62	8	June 8, 1845	78	John C. Calhoun....	1829
12	Andrew Jackson....							M. Van Buren......	1833
13	Martin Van Buren..	New York	1782	55	4			R. M. Johnson......	1837
14	Wm. H. Harrison*..	Ohio......	1773	68	–	April 4, 1841	68	John Tyler..........	1841
	John Tyler.........	Virginia..	1790	51	4				1841
15	James K. Polk......	Tennessee	1795	49	4	June 15, 1849	54	George M. Dallas....	1845
16	Zachary Taylor*....	Louisiana.	1784	65	1	July 9, 1850	66	Millard Fillmore....	1849
	Millard Fillmore....	New York	1800	50	3				1850
17	Franklin Pierce	N. Ham'e.	1804	49	4			William R. King....	1853
18	James Buchanan...	Penn.....	1791	66	..			John C. Breckenridge	1857

* Died in office, and succeeded by the Vice-President.

† Died in office.

TABLE

Of the Latitude and Longitude of principal places in the United States. with their Distances from Washington. The Longitudes are reckoned from Greenwich. The Capitals (Seats of Government) of the States and Territories are designated by Italic Letters.

Place.		Latitude, North.	Longitude, West; in Deg.	Longitude, West; in Time.	Dist. from Wash.
		° ′ ″	° ′ ″	h. m. s.	ms.
Albany (Capitol).........	N. Y.	42 39 3	73 44 49	4 54 59.3	376
Alexandria...............	Va.	38 49	77 4	5 8 16	6
Amherst (College Chapel).	Mass.	42 22 15.6	72 31 28	4 50 6	383
Annapolis (Naval Acad.).	Md.	38 58 50.1	76 29 26	5 5 57.7	37
Auburn.................	N. Y.	42 55	76 28	5 5 52	339
Augusta	Ga.	33 28	81 54	5 27 36	580
Augusta (State-House) ...	Me.	44 18 43	69 50	4 39 20	595
Baker's Island (Lights)....	Mass.	42 32 12	70 47 28	4 43 10	452
Baltimore (Battle Monument)................	Md.	39 17 23	76 37 30	5 6 30	38
Bangor (Court-House)....	Me.	44 47 50	68 47	4 35 8	661
Barnstable (New C. H.)...	Mass.	41 42 6	70 18 34	4 41 14.3	466
Batavia..................	N. Y.	42 59	78 13	5 12 52	370
Beaufort (Arsenal)........	S. C.	32 25 57	80 41 23	5 22 45.6	629
Bellevue, Am. Fur Co.'s trading post, right bank of Missouri river.......		38 8 24	95 47 46	6 23 11	
Boston (State-House).....	Mass,	42 21 22.7	71 4 9	4 44 16.6	432
Do. (Light)...........		42 19 41.1	70 53 43	4 43 33.9	
Brazos Santiago..........	Tex.	26 6 0	97 12 0		
Brent's Fort..............		38 2 38	113 33 15	6 54 13	
Bridgeport (Baptist Ch.)..	Conn.	41 10 30	73 11 46	4 52 47	284
Bristol (Episcopal Ch.)....	R. I.	41 40 8	71 17 19	4 45 9.3	409
Brooklyn (Navy Yard)....	N. Y.	40 41 50	73 59 30	4 55 58	227
Brunswick (College).....	Me.	43 53 0	69 55 1	4 39 40.1	568
Buffalo..................	N. Y.	42 53	78 55	5 15 40	376
Burlington........	N. J.	40 4 51.6	74 52 37	4 59 30.5	156
Burlington...............	Vt.	44 27	73 10	4 52 40	440
Cambridge (Observatory).	Mass.	42 22 48.6	71 7 30	4 44 32	431
Camden	S. C.	34 17	80 33	5 22 12	407
Canadian river, Head-waters of.............		37 1 [illegible]	104 37 32		
Canandaigua...........	N. Y.	42 54	77 17	5 9 8	336
Cape Ann (North Light)..	Mass.	42 38 21	70 34 48	4 42 19.2	470
Do. (South Light)..		42 38 13	70 34 48	4 42 19.2	

Place.	Latitude, North.	Longitude, West; in Deg.	Longitude, West; in Time.	Dist. from Wash.
	° ′ ″	° ′ ″	h. m. s.	ms.
Cape Cod (Light House)...Mass.	42 2 23	70 3 55	4 40 16	507
Cape Island, Lake of the Woods.	49 36 42			
Castine ....Me.	44 22 30	68 45	4 35	
Cedar Keys, Dépôt Island.	29 7 27	82 56 12		
Charleston, St. Mich.'s Ch..S. C.	32 46 33	79 57 27	5 19 49.8	544
Charlestown (Navy Yard)..Mass.	42 22	71 3 33	4 44 14.2	433
Chicago.................Ill.	42 0	87 35	5 50 2	763
Cincinnati (Fort Wash.)..Ohio.	39 5 54	84 27	5 37 48	497
Columbia...............S. C.	33 57	81 7	5 24 28	500
Columbus...............Ohio.	39 57	83 3	5 32 12	396
Concord (State-House)...N. H.	43 12 29	71 29	4 45 56	474
Corpus Christi............Tex.	27 47 17.8	97 27 2		
Dalles of the Columbia, Missionary Station......	45 35 55	120 55		
Dayton..................Ohio.	39 44	84 11	5 36 44	
Dedham (1st Cong. Ch.)...Mass.	42 14 57	71 10 59	4 44 44	422
Detroit (St. Paul's Ch.)....Mich.	42 19 45	83 2 33	5 32 10.2	526
Dorchester (Ast. Observ.)..Mass.	42 19 10	71 4 19	4 44 17.3	432
Dover..................Del.	39 10	75 30	5 2 0	114
Dover ....N. H.	43 13	70 54	4 43 36	490
Easton (Court-House) ....Md.	38 46 10	76 8	5 4 32	80
Eastport.................Me.	44 54	66 56	4 27 44	778
Edenton.................N. C.	39 0	77 7	5 28 23	284
Exeter..................N. H.	42 58	70 55	4 43 40	474
Falls of St. Anthony, U. S. Cottage...............	44 58 40	93 10 30	6 12 42	
Falls of the St. Croix.....	45 30 10	92 40 0	6 10 40	
False Washita, Head-waters of................	35 25 41	101 5 0		
Fort Boisée..............Oreg.	43 49 22	116 47 8		
Fort Brady..............Mich.	46 29 55			
Fort Gibson (Old Block-House)................	35 47 34.8	95 15 10	6 21 0.4	
Fort Hall...............	43 1 30	112 29 54	7 29 56	
Fort Laramie	42 12 10	104 47 43	6 59 11	
Ft. Leavenworth (Landing)	39 21 14	94 44 0	6 18 56	
Fort Nez Percé ....Oreg.	46 3 46			
Frankfort...............Ky.	38 14	84 40	5 38 40	551
Frederic.................Md.	39 24	77 18	5 9 12	43
Fredericsburg ....Va.	38 34	77 38	5 10 32	56
Georgetown.............S. C.	33 21	79 17	5 17 8	482

Place.	Latitude, North.	Longitude, West; in Deg.	Longitude, West; in Time.	Dist. from Wash.
	° ′ ″	° ′ ″	h. m. s.	ms.
Gloucester (Univ. Ch.)....Mass.	42 36 44	70 40 19	4 42 41.8	462
Do. (E. Point Light)	42 34 49.6	70 40 11	4 42 40.8	466
Do. (Ten Pound Isl. Light).......	42 86 4	70 40 17	4 42 41.1	468
Great Salt Lake, Island in	41 10 42	112 21 5		
Greenfield (2d Cong. Ch)..Mass.	42 85 16	72 86 82	4 50 26.1	896
Hagerstown..............Md.	89 87	77 85	5 10 20	68
Halifax..................N. S.	44 89 20	68 86 40	4 14 26.7	936
Hallowell................Me.	44 17	69 50	4 89 30	598
Harrisburg.............Pa.	40 16	76 50	5 7 20	110
Hartford (State-House)..Conn.	41 45 59	72 40 45	4 50 48	885
High Plateau between waters of Atlantic and Gulf of California............	42 2 8	107 8 0		
Holmes's Hole (Windmill) Mass.	41 27 15	70 86 88	4 42 26.5	457
Hudson.............N. Y.	42 14	78 46	4 55 4	845
Hudson (Reserve Coll.)...Ohio.	41 14 42	81 24 54	5 25 89.6	
Huntsville...............Ala.	34 86	86 57	5 47 48	726
Indianapolis............Ind.	89 55	86 5	5 44 20	578
Ipswich, Eastern Light....Mass.	42 41 8	70 46 17	4 43 5	462
Ipswich (Western Light)..Mass.	42 41 8	70 46 84	4 43 6.8	
Jackson................Miss.	82 28	90 8	6 0 82	1085
Jefferson................Mo.	38 86	92 8	6 8 82	980
Kanzas river, Mouth of....	89 6 8	94 82 54	6 18 11.6	
Key West (S. W. Pt.).....Fla.	24 82	81 47 80	5 27 10	
Kingston..................C. W.	44 8	76 40	5 6 40	456
Knoxville................Tenn.	85 59	83 54	5 85 26	516
Lancaster................Pa.	40 2 86	76 20 88	5 5 22.2	109
La Vaca..................Tex.	23 37 0			
Lexington................Ky.	88 6	84 18	5 87 12	584
Little Rock.............Ark.	84 40	92 12	6 8 48	1068
Lockport.................N. Y.	43 11	78 46	5 15 4	408
Louisville................Ky.	88 8	85 30	5 42 0	590
Lowell (St. Ann's Ch.)....Mass.	42 38 46	71 19 2	4 45 16	489
Lynchburg...............Va.	37 86	79 22	5 17 28	198
Lynn Church.............Mass.	42 27 51	70 57 25	4 43 50	441
Machias Bay.............Me.	44 88	67 22	4 29 28	
Marblehead.............Mass.	42 80 24	70 51 24	4 43 25.6	450
Do. (Light).......	42 80 14	70 50 89	4 48 22.6	448
Mexico, City of..........Mex.	19 25 45	99 5 6	6 86 20	
Middletown (Wesl. Univ.) Conn.	41 88 8	72 89	4 50 86	825
Milledgeville...........Ga.	88 7 20	88 19 45	5 88 19.0	642

Place.	Latitude, North.	Longitude, West;		Dist. from Wash.
		in Deg.	in Time.	
	° ′ ″	° ′ ″	h. m. s.	ms.
Milwaukie..............Wis.	43 8 45	87 57		700
Missouri river, Mouth of	38 51 36	90 0 40		
Mobile..................Ala.	30 41 48	87 59	5 51 56	1033
Monclova...............Mex.	26 54 0	101 39 18	6 46 37.2	
Monomoy Point Light....Mass.	41 33 35	69 59 56	4 40 0	500
Montpelier..............Vt.	44 17	72 36	4 50 24	524
Monterey...............Cal.	36 36 24	121 52 25	8 7 29	
Nantucket (South Tower)..Mass.	41 16 56	70 6 12	4 40 24.8	490
Nashville (University) ...Tenn.	36 9 33	86 49 8	5 47 16.2	714
Natchez (Fort Panmure)..Miss.	31 34	91 24 42	6 5 38.8	1146
Nebraska or Platte river, Junction of North and South Forks...........	41 5 5	101 21 24	6 45 25.6	
Newark ....N. J.	40 45	74 10	4 56 40	215
New Bedford (Mariners' Church) ....Mass.	41 38 7	70 55 49	4 43 43.8	429
Newbern ....N. C.	35 20	77 5	5 8 20	337
Newburg ....N. Y.	41 31	74 1	4 56 4	282
Newburyport (2d Pres.Ch.) Mass.	42 48 32	70 52 47	4 43 31.1	466
Do. (Light).....	42 48 30	70 49 6	4 42 18.0	460
Newcastle...............Del.	39 40	75 33	5 2 8	103
New Haven (College).....Conn.	41 18 23	72 56 45	4 51 47	301
New London.............Conn.	41 22	72 9	4 48 36	354
New Orleans (City Hall)..La.	29 57 30	90	6 0	1203
Newport (Court-House)..R. I.	41 29	71 19 12	4 45 16.8	403
New York (City Hall).....N. Y.	40 42 40	74 1 8	4 56 4.5	226
Nobsque Point Light.....Mass.	41 30 57	70 39 37	4 42 38.5	450
Norfolk (Farmer's Bank)..Va.	36 50 50	76 18 47	5 5 15.1	217
Northampton (1st Cong. Church)...............Mass.	42 19 9	72 38 15	4 50 33.2	376
Norwich ....Conn.	41 33	72 7	4 48 28	362
Parras..................Mex.	25 25			
Pass Washington.........	36 3 22	108 56 0	7 15 44	
Pensacola....... ....Fla.	30 24	87 10 12	5 48 40.8	1050
Petersburg...............Va.	37 13 54	77 20	5 9 20	144
Philadelphia (Ind'ce Hall).Pa.	39 56 59	75 9 54	5 0 39.6	136
Do. (High Sch. Obs.)	39 57 9	75 10 37	5 0 42.5	
Pittsburg................Pa.	40 32	80 2	5 20 8	223
Pittsfield (1st Cong. Ch.)..Mass.	42 26 55	73 15 36	4 53 2.3	380
Platte river, Mouth of.....	41 3 13			
Do. Junction of N. and S. Forks............	41 5 5	101 21 24	6 45 25.6	

Place.	Latitude, North.	Longitude, West; in Deg.	in Time.	Dist. from Wash.
	° ′ ″	° ′ ″	h. m. s.	ms.
Plattsburg ... N. Y.	44 42	73 26	4 53 44	539
Plymouth (Court-House) .. Mass.	41 57 26	70 40 19	4 42 41.3	439
Point Conception ...	34 26 56.8	120 25 40		
Pointa Loma ...	32 39 30.6	117 15 7		
Popocatapetl ... Mex.	18 59 47	98 37 8	6 33 48	
Portland (Mount Joy) ... Me.	43 39 52	70 13 34	4 40 54.2	542
Do. (Light) ...	43 36	70 12 12	4 40 49	
Portsmouth (Unit. Ch.) ... N. H.	43 4 35	70 45 50	4 43 3.3	491
Do. (Light) ...	43 3 30	70 43	4 42 52	
Poughkeepsie ... N. Y.	41 41	73 55	4 55 40	301
Prairie du Chien, Am. Fur Co.'s House ... Min.	43 3 6	91 9 19	6 4 37.3	
Princeton (Nassau Hall) .. N. J.	40 20 41	74 39 30	4 58 38	177
Providence (Univ. Hall) .. R. I.	41 49 22	71 24 48	4 45 39.2	394
Racine ... Wis.	42 49 33	87 40 22		
Raleigh ... N. C.	35 47	78 48	5 15 12	286
Remedios, de los, Harbor ..	57 24 15	135 58 41	9 3 34	
Richmond (Capitol) ... Va.	37 32 17	77 27 28	5 9 49.9	122
Rochester (Roch. House) .. N. Y.	43 8 17	77 51	5 11 24	361
Sabine river, entrance of South or outer extremity of Bar ... Tex.	29 40 48	93 49 8		
Sable (Cape) ... Fla.	24 50	81 15	5 25 0	
Sackett's Harbor ... N. Y.	43 55	75 57	5 3 48	407
Saco ... Me.	43 31	70 26	4 41 44	528
Sacramento City ... Cal.	38 34 42	120 nearly		
St. Augustine ... Fla.	29 48 30	81 35	5 26 20	841
St. Croix river, Mouth of ...	44 45 30	92 45 9	6 11 5	
St. Joseph ...	23 3 13	109 40 44	7 18 43	
St. Louis ... Mo.	38 37 28	90 15 16	6 1 0.7	856
St. Paul ... Min.	44 52 46	93 4 54		
St. Peter's river, Mouth of	44 52 46	93 4 54	6 12 19.6	
St. Vrain's Fort ...	40 16 52	105 12 28		
Salem (E. I. M. Hall) ... Mass.	42 31 18	70 53 53	4 43 35.5	446
San Antonio ... Tex.	29 25 22	98 29 15		
San Blas, Arsenal ...	21 32 34	105 15 24	7 1 1	
San Diego, Public Square.	32 45 0	117 11 0	7 48 44	
Sandwich (1st Cong. Ch.) .. Mass.	41 45 31	70 30 13	4 42 0.8	456
San Francisco (Span. Fort). Cal.	37 48 30	122 28 2	8 9 52	
Santa Fé ... N. M.	35 41 6			
Savannah (Exchange) ... Ga.	32 4 56	81 8 18	5 24 33.2	662
Schenectady ... N. Y.	42 48	73 55	4 55 40	391

Place.		Latitude, North.	Longitude, West; in Deg.	Longitude, West; in Time.	Dist. from Wash.
		° ′ ″	° ′ ″	h. m. s.	ms.
Snake river, above Amer. Falls		42 47 6	112 40.13		
Springfield	Ill.	39 48	89 33	5 58 12	801
Springfield (Court-House)	Mass.	42 6 4	72 35 45	4 50 28	357
Squam Harbor (Light)	Mass.	42 39 46	70 41 8	4 42 44.5	466
Straitsmouth Isl. (Light)	Mass.	42 39 41	70 35 36	4 42 22.4	471
Stratford	Conn.	41 11 7	73 8 45	4 52 35	287
Sweet Water river, North Fork of Platte river, Mouth of		42 27 18	107 45 27	7 11 1.8	
Tallahassee	Fla.	30 28	84 36	5 38 24	896
Taunton (Trin. Cong. Ch.)	Mass.	41 54 11	71 5 55	4 44 28.6	415
Tlamath Lake		42 56 51			
Toronto or York (Observ.)	C. W.	43 39 35	79 21 30	5 17 26	500
Trenton	N. J.	40 14	74 46 30	4 58 36	166
Trinity Bay	Oreg.	40 5 50			
Troy	N. Y.	42 44	73 40	4 54 40	383
Tuscaloosa	Ala.	33 12	87 42	5 50 48	858
University of Virginia	Va.	38 2 3	78 31 29	5 14 5.9	124
Utica (Dutch Church)	N. Y.	43 6 49	75 13	5 0 52	383
Vandalia	Ill.	38 50	89 2	5 56 8	781
Vevay	Ind.	38 46	84 59	5 39 56	556
Victoria	Tex.	28 46 57			
Vincennes	Ind.	38 43	87 25	5 49 40	693
WASHINGTON (Capitol)	D. C.	38 53 34	77 1 30	5 8 6	
Do. (Observatory)		38 53 32.8	77 3	5 8 12	
Washington	Miss.	31 36	91 20	6 5 20	1146
West Point (Milit. Acad.)	N. Y.	41 23 31.2	73 57 31	4 55 50.1	
Wheeling	Va.	40 7	80 42	5 22 48	264
Williamstown (Cong. Ch.)	Mass.	42 42 49	73 13 10	4 52 52.6	406
Wilmington	Del.	39 41	75 28	5 1 52	108
Wilmington	N. C.	34 11	78 10	5 12 40	416
Worcester (Ant. Hall)	Mass.	42 16 17	71 48 13	4 47 13.3	394
York	Me.	43 10 0	70 40	4 42 40	500
York	Pa.	39 58	76 40	5 6 40	87
Yorktown	Va.	37 13	76 34	5 6 16	

LIBRARY OF THE UNIVERSITY OF MICHIGAN

PUBLIC OBSERVATORIES AND TELESCOPES IN THE UNITED STATES.*

Observatories.	Telescopes.					
	When procured.	Name of maker.	Focal length.		Aperture of object-glass.	Cost.
			ft.	in.	inches.	
Yale College	1880	Dollond	10	–	5	$1,000
Wesleyan University	1836	Lerebours	7	–	6	1,000
Williams College	1836	Holcomb	10	–	Reflector	
	1852	A. Clark	9	–	7	
Hudson, Ohio	1837	Simms	5	6	4	
Philadelphia	1840	Merz	8	4	6⅜	1,900
West Point	1841	Lerebours	8	–	6	
Washington	1844	Merz	15	8	9·6	6,000
Cincinnati	"	"	17	–	12	9,437
Cambridge	1846	"	22	6	15	
Dartmouth College	1848	"	9	–	6·4	
Georgetown "	1849	Simms	7	6	4·8	1,600
Erskine "	"	Fitz	7	–	5·6	1,050
Shelby "	1850	Merz	10	4	7·5	3,500
Columbia (S.C.) "	1851	Fitz	8	4	6¼	1,200
Columbia (Mo.) "	1852	"	5	–	4	225

PRIVATE OBSERVATORIES IN THE UNITED STATES.

Owners and location.	Telescopes.					
	When procured.	Name of maker.	Focal length.		Aperture of object-glass.	Cost.
			ft.	in.	inches.	
J. Jackson, near Philadel.	1846	——	8	4	6·3	$1,833
M. Longstreet, Philadel.	"	Fitz	7	–	5	900
S. G. Gummere, Burlington, N. J.	1847	"	5	–	4	425
R. Vanarsdale, Newark, N. J.	1850	"	7	–	5	750
	1851	"	8	4	6¼	1,000
W. S. Van Duzer, Buffalo, N. Y.	1851	"	11	–	8¼	2,220
W. S. Dickie, Elkton, Ky.	1851	"	6	–	4½	800
D. Masmon, Bangor, Me.	1851	"	5	–	4	225
J. Campbell, New York	1852	"	10	–	8	1,150

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* From Mattison's Burritt's "Geography of the Heavens."

LIBRARY OF THE UNIVERSITY

FOREIGN OBSERVATORIES.

The following is a list of the principal foreign observatories, with their latitude and longitude. The longitude is from Greenwich, near London.

Observatories.	When estab.	Latitude.				Long. in time.			
		°	′	″		h.	m.	s.	
Alexandria	B.C. 300	31	12	9	N.				
Altona	—	53	32	45	N.	0	39	46·2	E.
Armagh	A.D. 1793	54	21	12·7	N.	0	26	35·5	W.
Berlin	1711	52	30	16·7	N.	0	53	34·9	E.
Bologna	1714	44	29	54	N.	11°	21′		E.
Brussels		50	51	10·7	N.	0	17	27·2	E.
Cambridge	1824	52	12	51·8	N.	0	0	23·5	E.
Cape of Good Hope		33	56	3	S.	1	13	56	E.
Cassel	1561	51	19	20	N.	90°	35′	18″	E.
Copenhagen	1657	55	40	53	N.	0	50	19·8	E.
Dorpat		58	22	47·1	N.	1	46	54·6	E.
Dublin	1783	53	23	13	N.	0	25	22	W.
Edinburg		55	57	23·2	N.	0	12	43	W.
Glasgow	1840								
Göttingen	1751	51	31	47·9	N.	0	39	46·1	E.
Greenwich	1675	51	28	38·2	N.	0	0	0	
Königsberg		54	42	50·4	N.	1	22	4	E.
Munich		48	8	45	N.	0	46	26·4	E.
Nuremberg	1678	49	27	31	N.	11°	4′	40″	E.
Oxford	1772	51	45	38	N.	1°	15′	29″	W.
Palermo		38	6	44	N.	0	53	25·5	E.
Paris	1667	48	50	13	N.	0	9	21·5	E.
Petersburg	1725	59	56	29·7	N.	2	1	13·5	E.
Rome		41	53	54	N.	0	49	54·7	E.
Turin		45	4	6	N.	0	30	48·4	E.
Vienna	1690	48	12	35·5	N.	1	5	32·6	E.

THE GREAT CRAIG TELESCOPE

Is the largest refracting telescope ever constructed. It is located on Wandsworth Common, near London. The object-glass is two feet in diameter, with a focal distance of seventy-six feet. The tube is of heavy sheet-iron, and shaped somewhat like a cigar. It is thirteen feet in circumference in the largest place, and weighs about three tons. This telescope is suspended from a brick tower, sixty-five feet high, fifteen feet in diameter, and weighing 220 tons. The top of the tower, from which the telescope is suspended, revolves; and, by a chain running over pulleys, and a weight and windlass. “

is balanced, and raised or lowered. The lower end rests on a small carriage that runs upon a circular railroad around the tower, at the distance of fifty-two feet from its center. By these means it is directed to almost any point in the heavens. It is called the "Craig" telescope, in honor of the Rev. Mr. Craig, under whose direction and at whose expense it was constructed.

THE REFLECTING TELESCOPE.

The first telescope of this kind was that constructed under the direction of Sir William Herschel, in 1782. This was called his twenty-feet reflector, and was the instrument with which he made many of his observations upon the double stars. In 1789 he completed his forty-feet reflector, until recently the largest telescope ever constructed. The speculum of this instrument is four feet in diameter, three and a half inches thick, and weighed, before being ground, 2,118 pounds. This tube is made of sheet-iron riveted together, and painted within and without. The length of the tube is thirty-nine feet four inches, and its weight 8,260 pounds. It is elevated or lowered by tactiles, attached to strong frame-work; and the observer, who sits in a chair at the upper end of the tube, and looks down into the reflector at the bottom, is raised and lowered with the instrument. Three persons are necessary to use this telescope—one to observe, another to work the tube, and a third to note down the observations. A speaking tube runs from the observer to the house where the assistants are at work. By this telescope the sixth and seventh satellites of Saturn were discovered; and it was the chief instrument used by its distinguished owner in making observations and discoveries which have immortalized his name, and which have so abundantly enriched and advanced the science of astronomy.

Lord Rosse's great reflecting telescope is the largest reflecting telescope ever constructed. The speculum, composed of copper and tin, weighed three tons as it came from the mold, and lost about one eighth of an inch in grinding. It is five and a half inches thick and six inches in diameter. It was cast on the 13th of April, 1842, and was cooled gradually in an oven for sixteen weeks to prevent its cracking by a sudden or unequal reduction of the temperature. This speculum has a reflecting surface of 4,071 square inches. The tube is made of deal wood, one inch thick, and hooped with iron. Its diameter is seven feet, and its length fifty-six. The entire weight of this telescope is twelve tons. It is mounted between two north and south walls, twenty-four feet apart, seventy-two feet long, and forty-eight feet high. It can be lowered to the horizon, and raised to the zenith, and lowered north-west till it takes in the Pole Star. Its motion from east to west is limited to fifteen degrees. This magnificent instrument is situated at Burr Castle, Ireland. It was constructed by the Earl of Rosse, at an expense of $60,000.—*Mattison's Burritt's Geography of the Heavens.*

VELOCITY AND FORCE OF THE WIND.

BY MR. ROUSE.

Velocity of the Wind.		Perpendicular force on 1 ft. area in pounds avordupois.	Common appellations of the force of the Winds.
Miles in an hour.	Feet in a second.		
1	1·47	·005	Hardly perceptible.
2	2·93	·020	Just perceptible.
3	4·40	·044	
4	5·87	·079	Gentle, pleasant wind.
5	7·33	·123	
10	14·67	·492	Pleasant, brisk gale.
15	22	1·107	
20	29·34	1·968	Very brisk.
25	36·67	3·075	
30	44·01	4·429	High winds.
35	51·34	6·027	
40	58·68	7·873	Very high.
45	66·01	9·963	
50	73·35	12·300	A storm, or tempest.
60	88·02	17·715	A great storm.
80	117·36	31·490	A hurricane.
100	146·70	49·200	A hurricane that tears up trees, carries buildings before it, etc.

IMMIGRATION TO THE UNITED STATES.

(*From Bromwell's History of Immigration to the United States.*)

Prior to 1819 no authentic information exists as to the progress and extent of immigration to the United States, except such as is furnished by the statisticians of the period.

The current of immigration commenced its flow from England, Ireland, and Scotland, and from Germany through the French and British ports. It was subject to many fluctuations during a part of this time, but continued with considerable uniformity, it is believed, until 1806.

Mr. Samuel Blodget, a statistician of more than ordinary research and accuracy, wrote, in 1806, while every fact in regard to immigration was fresh in the minds of the people, that from "the best records and estimates at present attainable," the immigrants arriving in this country did not average for the ten years, from 1784 to 1794, more than 4,000 per annum.

During 1794, 10,000 persons were estimated to have arrived in the United States from foreign countries.

In 1818, Dr. Adam Seybert, member of the House of Representatives, from Pennsylvania, in his exceedingly valuable Statistical Annals of the United States, wrote to the following effect:

"Though we admit that 10,000 foreigners may have arrived in the United States in 1794, we can not allow that they did so in an equal number in any preceding or subsequent year until 1817;" and he assures us that 6,000 persons arrived in the United States from foreign countries in each year from 1790 to 1810. To him and to the authorities he consulted, this average seemed a generous one.

During the ten years from 1806 to 1816, extensive immigration to the United States was precluded by the unfriendly relations at that time existing between Great Britain, France, and the United States.

England maintained the doctrine, and for a while enforced it with success, that "a man being once a subject, was always a subject." This deterred many from emigrating to this country from the British empire. Numbers had previously come for the purpose of entering the American merchant service, and numbers still might have come whom the fear of British imprisonment frightened from carrying out their design.

Another influence retarded immigration. In 1806, Great Britain issued a decree declaring the coasts of France in a state of blockade. A retaliatory decree was, in November of the same year, issued by France, declaring the British Isles in a state of blockade

To these restrictions on commerce, and consequently on the unobstructed passage from Europe, succeeded the British orders in council, and the Milan decree of Napoleon.

In March, 1809, the United States law was passed, prohibiting for one year intercourse with Great Britain and France.

In 1810 the Napoleonic decrees were annulled; and the commerce of the United States had, in 1811, fairly commenced with France, but only to have their vessels fall into the hands of the British.

Preparations were now making for active hostilities, and on the 18th of June, 1812, war was formally declared by the United States to exist with Great Britain.

The German emigration sensibly felt this unfavorable condition of affairs, inasmuch as the Germans embarked principally at the ports of Liverpool and Havre, facilities for emigrating thence to this country being more numerous, and the expense being less onerous. Thus, from 1806, was the stream of emigation pent up at its fountain.

In February, 1815, peace was concluded between the United States and Great Britain; and after several months requisite to restore peace and tranquillity, and to secure the confidence of those desiring to leave the old world, the tide resumed its flow, and with a speed greatly accelerated; as from authentic information collected principally at the several custom-houses, it appears that during the year 1817, not less than 22,240 persons arrived at ports of the United States from foreign countries. This number included American citizens returning from abroad.

previous to that had one half so many foreign passen-
r shores. Many sufferings were incident to a voy-
tlantic in a crowded emigrant vessel; and there

were no laws of the United States either limiting the number of persons which a passenger ship or vessel should be allowed to carry, or providing any measure for the health or accommodation of the passengers. The subject seemed to deserve the immediate attention of Congress. In 1818 (March 10) Louis McLane of Delaware, reported to the House of Representatives a bill regulating passenger ships and vessels, which was read twice and referred. In December of the following session, it was called up by Thomas Newton of Virginia, who explained the necessity of its passage. It was read a third time and passed by the House. After receiving amendments from both the Senate and House, it was finally passed and approved March 2d, 1819.

In compliance with a requirement of this act, collectors of the customs have reported quarter-yearly to the Secretary of State, the number of passengers arriving in their collection districts by sea from foreign countries; also the sex, age, and occupation of such passengers, and the country in which they were born. Annual reports, embracing that information have, in conformity with the same act, been communicated to Congress by the Secretary of State; and, as before indicated, from these reports chiefly, this summary has been compiled.

PROGRESS AND EXTENT OF IMMIGRATION TO U. S.

From Sept. 30, 1819, *to Dec.* 31, 1855.

Period of Years.				No. of Pas.	For. Birth.
During the 10 years	ending	Sept.	30, 1829,	151,636	128,502
" 10¼	"	Dec.	31, 1839,	572,716	538,381
" 9¾	"	Sept.	30, 1849,	1,479,478	1,427,337
" 6¼	"	Dec.	31, 1855,	2,279,007	2,118,404
" 36¼	"	"	"	4,482,837	4,212,624

Of the 4,212,624 passengers of foreign birth arriving in the United States during the above-mentioned period of 36¼ years—

207,492	were born in	England,
747,930	"	Ireland,
34,555	"	Scotland,
4,782	"	Wales; and
1,348,682	others were born in	Great Britain and Ireland, the division not designated.
2,343,441	total number born in	the United Kingdom.
1,206,087	were born in	Germany,
35,995	"	Prussia,
17,583	"	Holland,
6,991	"	Belgium,
31,071	"	Switzerland,
188,725	"	France,
11,251	"	Spain,
6,049	"	Portugal,
3,059	"	Denmark,
29,441	"	Norway and Sweden,

1,318 were born in Poland,
938 " Russia,
123 " Turkey,
7,185 " Italy,
108 " Greece,
338 " Sicily,
706 " Sardinia,
9 " Corsica,
116 " Malta,
526 others in Europe, division not designated
91,699 were born in British America,
5,440 " South America,
640 " Central America,
15,969 " Mexico,
35,317 " West Indies,
16,714 " China,
101 " East Indies,
7 " Persia,
16 others in Asia; division not designated.
14 were born in Liberia,
4 " Egypt,
5 " Morocco,
2 " Algiers,
4 others were born in the Barbary States; division not designated.
2 were born at the Cape of Good Hope.
118 others in Africa, division not designated.
278 were born at the Canary Islands,
1,183 " " Azore Islands,
203 " " Madeira Islands,
22 " " Cape Verde Islands,
59 " " Sandwich Islands,
5 " " Society Islands,
79 " " South Sea Islands,
3 " " Island of France,
14 " " St. Helena,
20 " " Australia,
157,537 others were born in countries not designated in the returns made by collectors of the customs.

The country having the largest immigration is doubtless Ireland, for, in addition to the 747,930 persons arriving from the United Kingdom known to have been born in Ireland, it is safe to assume that of the 1,348,682 others born, as indefinitely stated, in "Great Britain and Ireland" arriving in the United States, 1,000,000 were born in Ireland alone, thus making 1,747,930 as the total Irish emigration.

Next, in numerical order, comes Germany; England third; and France fourth.

The emigration of Chinese to this country was very inconsiderable until 1854, previous to which year the aggregate number known to have arrived was only 88. In that year, however, 13,000 came to the United States; and in 1855, 3,526; all of whom, with the exception of a single passenger, landed at the port of San Francisco; 15,950 were males, and were designated in the returns of the collector as "laborers."

As regards passengers from British America, the fact may be deemed worthy of mention, that many of them, especially of those arriving during the last four years, are known to have come with the intention of returning, and not of residing in the United States. The number of such can not, however, be determined.

Finally, to the 4,212,624 passengers of foreign birth arriving in the United States since September 30, 1819, may be added 250,000 as the number of immigrants who arrived prior to that date; making the total of foreign arrivals, from the close of the Revolutionary War to December 31, 1855, 4,462,624.

RELIGIOUS DENOMINATIONS IN THE UNITED STATES,

ACCORDING TO THE CENSUS OF 1850.

DENOMINATIONS.	No. of churches.	Aggregate accommodations.	Average accom.	Total value of church property.	Average value of property.
				$	$
Baptist	8,791	3,130,878	356	10,931,382	1,244
Christian	812	296,050	365	845,810	1,041
Congregational	1,674	795,177	475	7,973,962	4,763
Reformed Dutch	324	181,986	561	4,096,730	12,644
Episcopal	1,422	625,213	440	11,261,970	7,919
Free	361	108,605	300	252,255	698
Friends	714	282,823	396	1,709,867	2,395
German Reformed*	327	156,932	479	965,880	2,953
Jewish	31	16,575	534	371,600	11,987
Lutheran*	1,203	531,100	441	2,867,886	2,383
Mennonite	110	29,900	272	94,245	856
Methodist	12,467	4,209,333	337	14,636,671	1,174
Moravian	331	112,185	338	443,347	1,339
Presbyterian	4,584	2,040,316	445	14,369,889	3,135
Roman Catholic	1,112	620,950	558	8,973,838	8,069
Swedenborgian	15	5,070	338	108,100	7,206
Tunker	52	35,075	674	46,025	885
Union	619	213,552	345	690,065	1,114
Unitarian	243	137,367	565	3,268,122	13,449
Universalist	494	205,462	415	1,767,015	3,576
Minor sects	325	115,347	354	741,980	2,283
Total	36,011	13,849,896	384	86,416,639	2,400

* The German Reformed and Lutheran use the same building in many places.

FOREIGN MONEYS REDUCED TO UNITED STATES CURRENCY.

ENGLISH STERLING.

s.	$	c.	m.	s.	$	c.	m.	£	$	c.	£	$	c.	£	$	c.	£	$	c.	£	$	c.
1		24	2	11	2	66	2	1	4	84	11	53	24	21	101	64	31	150	04	41	198	44
2		48	4	12	2	90	4	2	9	68	12	58	08	22	106	48	32	154	88	42	203	28
3		72	6	13	3	14	6	3	14	52	13	62	92	23	111	32	33	159	72	43	208	12
4		96	8	14	3	38	8	4	19	36	14	67	76	24	116	16	34	164	56	44	212	96
5	1	21	0	15	3	63	0	5	24	20	15	72	60	25	121	00	35	169	40	45	217	80
6	1	45	2	16	3	87	2	6	29	04	16	77	44	26	125	84	36	174	24	46	222	64
7	1	69	4	17	4	11	4	7	33	88	17	82	28	27	130	68	37	179	08	47	227	48
8	1	93	6	18	4	35	6	8	38	72	18	87	12	28	135	52	38	183	92	48	232	32
9	2	17	8	19	4	59	8	9	43	56	19	91	96	29	140	36	39	188	76	49	237	16
10	2	42	0	20	4	84	0	10	48	40	20	96	80	30	145	20	40	193	60	50	242	00

FRENCH FRANCS.

fr.	$	c.	fr.	$	c.	fr.	$	c.	fr.	$	c.	fr.	$	c.	fr.	$	c.	fr.	$	c.
1		19	16	2	98	31	5	77	46	8	56	61	11	35	76	14	14	91	16	93
2		37	17	3	16	32	5	95	47	8	74	62	11	53	77	14	32	92	17	11
3		56	18	3	35	33	6	14	48	8	93	63	11	72	78	14	51	93	17	30
4		74	19	3	53	34	6	32	49	9	11	64	11	90	79	14	69	94	17	48
5		93	20	3	72	35	6	51	50	9	30	65	12	09	80	14	88	95	17	67
6	1	12	21	3	91	36	6	70	51	9	49	66	12	28	81	15	07	96	17	86
7	1	30	22	4	09	37	6	88	52	9	67	67	12	46	82	15	25	97	18	01
8	1	49	23	4	28	38	7	07	53	9	86	68	12	65	83	15	44	98	18	23
9	1	67	24	4	46	39	7	25	54	10	04	69	12	83	84	15	62	99	18	41
10	1	86	25	4	65	40	7	44	55	10	23	70	13	02	85	15	81	100	18	60
11	2	05	26	4	84	41	7	63	56	10	42	71	13	21	86	16	00	200	37	20
12	2	23	27	5	02	42	7	81	57	10	60	72	13	39	87	16	18	300	55	80
13	2	42	28	5	21	43	8	00	58	10	79	73	13	58	88	16	37	400	74	40
14	2	60	29	5	39	44	8	18	59	10	97	74	13	76	89	16	55	500	93	00
15	2	79	30	5	58	45	8	37	60	11	16	75	13	95	90	16	74	600	111	60

THALERS.

t.	$	c.	t.	$	c.	t.	$	c.	t.	$	c.	t.	$	c.	t.	$	c.	t.	$	c.
1		69	8	5	52	15	10	35	22	15	18	29	20	01	36	24	84	43	29	67
2	1	38	9	6	21	16	11	04	23	15	87	30	20	70	37	25	53	44	30	36
3	2	07	10	6	90	17	11	73	24	16	56	31	21	39	38	26	22	45	31	05
4	2	76	11	7	59	18	12	42	25	17	25	32	22	08	39	26	91	46	31	74
5	3	45	12	8	28	19	13	11	26	17	94	33	22	77	40	27	60	47	32	43
6	4	14	13	8	97	20	13	80	27	18	63	34	23	46	41	28	29	48	33	12
7	4	83	14	9	66	21	14	49	28	19	32	35	24	15	42	28	98	49	33	81

BREMEN RIX DOLLARS.

r.d.	$	c.	r.d.	$	c.	r.d.	$	c.	r.d.	$	c.	r.d.	$	c.	r.d.	$	c.
1		78¾	9	7	09	17	13	39	25	19	69	33	25	99	41	32	29
2	1	58	10	7	88	18	14	18	26	20	48	34	26	78	42	33	08
3	2	36	11	8	66	19	14	96	27	21	26	35	27	56	43	33	86
4	3	15	12	9	45	20	15	75	28	22	05	36	28	35	44	34	65
5	3	94	13	10	24	21	16	64	29	22	84	37	29	14	45	35	44
6	4	73	14	11	03	22	17	33	30	23	63	38	29	93	46	36	23
7	5	51	15	11	81	23	18	11	31	24	41	39	30	71	47	37	01
8	6	30	16	12	60	24	18	90	32	25	20	40	31	50	48	37	80

EXCHANGE ON ENGLAND.

5	per cent.	$4.66.7	7¾	per cent.	$4.78.9	10	per cent.	$4.88.9
5¼	“ “	4.68.0	8	“ “	4.80.0	10¼	“ “	4.90.0
5¾	“ “	4.70.0	8¼	“ “	4.81.1	10½	“ “	4.91.1
6	“ “	4.71.1	8½	“ “	4.82.2	10¾	“ “	4.92.2
6¼	“ “	4.72.2	8¾	“ “	4.83.3	11	“ “	4.93.3
6½	“ “	4.73.3	9	“ “	4.84.4	11¼	“ “	4.94.4
6¾	“ “	4.74.4	9¼	“ “	4.85.6	11½	“ “	4.95.5
7	“ “	4.75.6	9½	“ “	4.86.7	11¾	“ “	4.96.7
7¼	“ “	4.76.7	9¾	“ “	4.87.8	12	“ “	4.97.8
7½	“ “	4.77.8						

Old par value of the pound sterling is $4.44.4. Present standard value is $4.84.4. When exchange is at 9 per cent. it is then at par value; if less than 9 it is below, if higher than 9 it is above.

To reduce old par value, $4.44.4, to dollars, multiply by 40, and divide by 9. To reduce dollars to old par value, reverse by multiplying by 9 and dividing by 40. The shillings and pence must first be reduced to decimals of a pound.

Intercourse with Foreign Nations.—The pay of Envoys Extraordinary, and Ministers Plenipotentiary, and so of Chargés, Secretaries of Legation, and of Ministers Resident, varies with the country to which they are commissioned. The United States are represented by Ministers Plenipotentiary at the courts of Great Britain, France, Spain, Russia, Prussia, Mexico, Brazil, Chili, Peru, and Central America; and by Chargés d'Affaires or Ministers Resident, at the courts of most of the other foreign powers with which this country is connected by commercial intercourse.

Patent-Office.—In the year 1855, about 2,000 patents were issued from the patent-office to various inventors.

United States Marine Hospitals, etc.—Number of sick or suffering seamen aided in United States hospitals, etc. in 1855, 13,640; expended for their relief, $293,734.

TABLE OF DISTANCES

From the Battery.	From the Exchange.	From the City Hall.	To	From the Battery.	From the Exchange.	From the City Hall.	To
Miles.	Miles	Miles.		Miles.	Miles.	Miles.	
½	¼	—	Fulton-street.	5¼	5	4½	68th-street.
¾	½	—	Warren "	5½	5¼	4¾	73d "
1	¾	¼	Leonard "	5¾	5½	5	78th "
1¼	1	½	Canal "	6	5¾	5¼	83d "
1½	1¼	¾	Spring "	6¼	6	5½	88th "
1¾	1½	1	Houston "	6½	6¼	5¾	93d "
2	1¾	1¼	4th "	6¾	6½	6	97th "
2¼	2	1½	9th "	7	6¾	6¼	102d "
2½	2¼	1¾	14th "	7¼	7	6½	107th "
2¾	2½	2	17th "	7½	7¼	6¾	112th "
3	2¾	2¼	24th "	7¾	7½	7	117th "
3¼	3	2½	29th "	8	7¾	7¼	121st "
3½	3¼	2¾	34th "	8¼	8	7½	126th "
3¾	3½	3	38th "	8½	8¼	7¾	131st "
4	3¾	3¼	44th "	8¾	8½	8	136th "
4¼	4	3½	49th "	9	8¾	8¼	140th "
4½	4¼	3¾	54th "	9¼	9	8½	145th "
4¾	4½	4	58th "	9½	9¼	8¾	150th "
5	4¾	4¼	63d "	9¾	9½	9	154th "

"A Sabbath day's journey," 1,155 yards; which is 18 yards less than two thirds of a mile. "A day's journey," 33⅓ miles. "A reed," 10 feet 11⅓ inches. "A palm," 3 inches. "A fathom," 6 feet. A Greek foot is 12⅛ inches. A Hebrew foot is 1.212 of an English foot. A cubit is 2 feet. A great cubit is 11 feet. An Egyptian cubit is 21.888 inches. A span is 10.944 inches.

VALUE OF THE WHALE FISHERY.

The exports of oil, bone, and candles from the United States to foreign countries during the fiscal year ending June 30, 1855, amounted to more than 3,000,000 of dollars: namely,

Articles.	Quantity.	Value.
Sperm oil, gallons	958,744	$1,593,882
Whale " "	795,392	485,505
Sperm candles, lbs.	489,826	136,468
Spermaceti candles, lbs.	177,354	45,411
Whalebone, lbs.	2,943,809	781,689
Total value		$3,042,891

POPULATION OF CITIES,

Showing their increase in half a century.

CITIES.	1800.	1810.	1820.	1830.	1840.	1850.
Albany, N. Y........	5,849	9,356	12,630	24,238	33,721	50,763
Bangor, Maine......		850	1,221	2,687	8,627	14,432
Boston, Mass........	24,027	33,250	43,298	61,392	93,383	136,881
Brooklyn, N. Y......	3,298	4,402	7,175	12,042	36,233	96,838
Buffalo, "		1,509	2,095	8,653	18,213	42,261
Baltimore, Md......	26,614	46,555	62,738	80,625	102,313	169,054
Charleston, S. C.....	18,712	24,711	24,480	30,289	29,261	42,985
Cincinnati, Ohio	750	2,540	9,644	24,831	46,338	115,436
Columbus "				2,435	6,048	17,882
Cleveland "		547	606	1,076	6,071	17,084
Chicago, Ill.					4,479	29,963
Detroit, Mich.			1,422	2,222	9,102	21,019
Hartford, Conn......		3,955	4,726	7,074	12,793	13,555
Lowell, Mass........				6,474	20,796	33,383
Louisville, Ky......		1,357	4,012	10,352	21,210	43,194
Manchester, N. H...		615	761	877	3,235	13,932
Milwaukie, Wis.....					1,700	20,061
New Orleans, La....		17,242	27,176	46,310	102,193	116,375
Nashville, Tenn.....				5,566	6,929	10,478
Newark, N. J.			6,507	10,953	17,290	38,894
New York. N. Y.....	60,489	96,373	123,706	203,007	312,710	515,547
New Haven, Conn...		5,772	7,147	10,180	14,890	20,345
Mobile, Ala.........				3,194	12,672	20,515
Portland, Maine.....	3,677	7,169	8,581	12,601	15,218	20,815
Paterson............					7,596	11,334
Philadelphia City and County....	70,287	96,664	108,116	167,188	258,037	408,762
Pittsburg, Pa.......	1,565	4,768	7,248	12,542	21,115	46,601
Rochester, N. Y.....			1,502	9,269	20,191	36,403
Richmond, Va	5,537	9,735	12,046	16,060	20,153	27,570
Springfield, Mass....		2,767	3,914	6,784	10,985	11,766
Salem, "	9,457	12,613	12,721	13,886	15,082	20,264
Syracuse, N. Y......					6,502	22,271
Savannah, Ga.......			7,523	9,748	11,240	15,312
St. Louis, Mo........			4,598	5,852	16,469	77,860
San Francisco, Cal...						15,000
Troy, N. Y..........		3,885	5,264	11,401	19,334	28,785
Utica, "			2,972	8,323	12,782	17,565
Washington, D. C...	3,210	8,208	13,247	18,827	23,364	40,001
Williamsburg, N. Y..				1,620	5,680	30,780
Worcester, Mass....					7,497	17,049

MILITARY ESTABLISHMENT OF THE STATE OF NEW YORK FOR 1857.

* Myron H. Clark, Commander-in-chief, Albany.
Robert H. Pruyn, Adjutant-general, Albany.
Benjaman F. Bruce, Inspector-general, New York.
J. H. H. Ward, Commissary-general, New York.
O. Vandenburgh, Judge-advocate-general, Syracuse.
James L. Mitchell, Quarter-master-general, Albany.
A. H. Hoff, Surgeon-general, Albany.
Samuel C. Thompson, Engineer-in-chief, New York.
E. E. Kendrick, Paymaster-general, Albany.
John Sill, Aide-de-camp, Albany.
R. H. Hinman, do., Williamsburg.
Lorenzo E. Clark, do., New York.
William E. Mills, Assistant-adjutant-general, Clarence.
Elbert Birdsall, Assistant-commissary-general, New York.

COMMANDANTS OF DIVISIONS,

Their residences, and counties embraced in each Division.

1st Division—Major-general, Charles W. Sandford, New York; New York and Richmond.
2d “ Major-general, Aaron Ward, Sing Sing; Kings, Queens, Suffolk, Westchester, Putnam, Orange, Rockland, Sullivan, and Ulster.
3d Major-general, John Taylor Cooper, Albany; Dutchess, Columbia, Rensselaer, Albany, Schenectady, Greene, and Delaware.

COMMANDANTS OF BRIGADE,

And where assigned.

1st Brigade—	Brigadier-general,	Chas. B. Spicer,	New York.
2d “	“	Chas. Yates,	“
3d “	“	Wm. Hall,	“
4th “	“	John Ewen,	“
5th “	“	H. B. Duryea,	Brooklyn.
6th “	“	J. A. Herriman,	Jamaica,
7th “	“	Munson J. Lockwood, W. W. Scurgham.	contested in courts.
8th “	“	Henry A. Samson,	Samsonville.
9th “	“	Vacant,	Tivoli.
10th “	“	Darius Allen,	Troy.
11th “	“	Albert T. Dunham,	Watervliet.
12th “	“	Benjaman J. Bassett,	Walton.

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* Until the 1st of January, 1857, the Commander-in-chief's staff [illegible] be as above. After that date, John A. King, the governor elect, commander-in-chief, and will probably appoint a new staff.

13th	Brigade—	Brigadier-gen'l,	J. T. Blanchard, Saratoga Springs.
14th	"	"	Thomas S. Gray, Warrensburg.
15th	"	"	Schuyler F. Judd, Ogdensburg.
16th	"	"	Albert Rice, North Adams.
17th	"	"	Amos H. Prescott, Mohawk.
18th	"	"	George E. Danforth, Middleburg.
19th	"	"	Zadock T. Bentley, Morrisville.
20th	"	"	Russell W. Humphrey, Bainbridge.
21st	"	"	Richard W. Sherman, Utica.
22d	"	"	Ranson H. Tylor, Fulton.
23d	"	"	Jesse Segoin, Auburn.
24th	"	"	Robt. M. Richardson, Syracuse.
25th	"	"	Lansing B. Swan, Rochester.
27th	"	"	(Vacant.)
29th	"	"	S. S. Burroughs, Medina.
30th	"	"	C. T. Chamberlain, Cuba.
31st	"	"	G. A. Scroggs, Buffalo.
32d	"	"	Aaron Riley, Aurora.

COMMANDANTS OF REGIMENTS.

New York.—1st Regt., Colonel, John B. Ryer; Lieutenant-colonel, Wm. Forsyth; Major, John Hoey. 2d Regt., Colonel, J. Augs. Bogart; Lieutenant-colonel, Jos. Craig; Major, J. W. Braisted. 3d Regt., Colonel, S. Brooke Postley; Lieutenant-colonel, Wm. Meack; Major, John Betchell. 4th Regt., Colonel, Edward Hincken; Lieutenant-colonel, Daniel H. Teller; Major, Nathaniel Coles. 5th Regt., Colonel, Christopher Schwarzwalder; Lieutenant-colonel, W. H. Gunther; Major, Jacob Bom. 6th Regt., Colonel, Jos. C. Pinckney; Lieutenant-colonel, Colin M. Cordell. 7th Regt., Colonel, Abraham Duryea; Lieutenant-colonel, Marshall Lefferts. 8th Regt., Colonel, George Lyons; Lieutenant-colonel, Geo. F. Betts; Major, Chas. Waterbury. 9th Regt., Colonel, Lucius Pitkin, Lieutenant-colonel, P. Daniel Kelly; Major, Richard Barry. 10th Regt., Col., Wm. Halsey; Lieutenant-colonel, Thos. Jones; Major, G. J. Smith. 11th Regt., Col., Michl. M. Van Buren; Lieutenant-colonel, Homer Bostwick; Major, Geo. E. Marshall. 12th Regt., Colonel Richard French; Major, Henry A. Weeks.

Brooklyn.—13th Regt., Colonel Abel Smith; Lieutenant-colonel, John J. Wiseman; Major, Henry Welden. 14th Regt., Colonel Jesse C. Smith; Lieutenant-colonel, Wm. Milford; Major, Alfred M. Wood.

Flushing.—15th Regt., Colonel, Chas. A. Hamilton; Lieutenant-colonel, Wm. A. Mitchell; Major, John Rukey.

Sag Harbor.—16th Regt., Colonel Philander R. Jennings; Major, Roger A. Francis.

Haverstraw.—17th Regt., Colonel, Edward Pye; Lieutenant-col., John P. Jenkins.

South East.—18th Regt., Colonel Jas. Ryder; Lieutenant-colonel, John H. Hyatt; Major, E. Lockwood Close.

Newburg.—19th Regt., Colonel, S. C. Parmenter; Lieutenant-colonel, Adam Libbum; Major, Wm. R. Brown.

Clayville.—20th Regt., Colonel, Gideon E. Bushnell; Lieutenant-Colonel, Hiram Schoonmaker; Major, Theo. B. Gates.

Poughkeepsie.—21st Regt., Colonel, Jas Wright; Lieutenant-col., Henry F. Pultz; Major, James Grant Wilson.

Rhinebeck.—22d Regt., Colonel, Wm. P. Wainwright; Lieutenant-colonel, James Mulford; Major, James Decker.

Schodack.—23d Regt., Colonel, Nicholas S. Miller; Lieutenant-colonel, Hugh W. McClelland.

Lansingburg.—24th Regt., Colonel, Henry A. Mercer; Lieutenant-colonel, Geo. Brust; Major, John H. Burns.

Albany.—25th Regt., Colonel, Edward Frisby; Lieutenant-colonel, John W. Harcourt; Major, Richard C. Bentley.

Schenectady.—26th Regt., Colonel Stephen Yates; Lieutenant-colonel. John A. Barhydt; Major, Nicholas F. Whitbeck.

Franklin.—27th Regt., Colonel, Samuel F. Miller; Lieutenant-colonel, James Oliver; Major, Chas. A. Edgerton.

Prattsville.—28th Regt., Colonel, Geo. W. Pratt; Lieutenant-colonel, M. B. Mattice; Major, Wm. E. Leete.

Saratoga Springs.—29th Regt., Colonel, Calvin T. Peck; Lieutenant-colonel, M. G. Putnam.

N. White Creek.—30th Regt., Colonel, John S. Crocker; Lieutenant-colonel, N. B. Milliman; Major, John McKie, Jr.

Westport.—31st Regt., Colonel, Henry J. Person; Lieutenant-colonel, John J. Meriam; Major, Lewis C. Hamilton.

Plattsburg.—32d Regt., Colonel, Buel Palmer; Lieutenant-colonel, A. L. Woodworth; Major, John W. Hubbell.

Ogdensburg.—33d Regt., Colonel, E. M. Holbrook; Lieutenant-colonel, Wm. Stevenson; Major, Daniel F. Waid.

Malone.—34th Regt., Colonel C. F. S. Thorndike; Lieutenant-colonel, A. W. Cushman; Major, F. D. Flanders.

Limerick.—35th Regt., Colonel John W. Edwards; Lieutenant-colonel, Wm. C. Brown; Major, James A. Pierce.

Rodman.—36th Regt., Colonel, Albert R. Ralph; Lieutenant-col., L. B. Jenkins; Major, Caleb Henderson.

Amsterdam.—37th Regt., Colonel, John McDonald, Jr.

Little Falls.—38th Regt., Colonel, George A. Feeter; Lieutenant-colonel, Jeremy Myres; Major, Wm. W. Wadsworth.

Springfield.—39th Regt., Colonel, John D. Shaul; Lieutenant-colonel, A. W. Burneson; Major, Jas. E. Dewey.

Minaville.—40th Regt., Colonel Elias A. Brown; Lieutenant-colonel, John Brooks; Major, Thos. E. Fen.

Pittsfield.—41st Regt., Colonel, Chester Card; Lieutenant-colonel, Delos W. Dunbar; Major, Israel Hubbell.

Peterborough.—42d Regt., Colonel, Thomas F. Petrie; Lieutenant-colonel, James Whetford; Major, Albert S. Morton.

Oxford.—43d Regt., Colonel, John B. Wheeler; Lieutenant-col., Seymour L. Judd; Major, Rush W. Carrier.

Owego.—44th Regt., Colonel, N. W. Davis; Lieutenant-colonel, Wm. W. Ross; Major, Geo. W. Woodford.

4th Division, Major-general, Orville Clark; Sandy Hill, Washington, Saratoga, Warren, Essex, Clinton, Franklin, St. Lawrence, Jefferson, and Lewis.

5th Division, Major-general, Samuel S. Burnside; Worcester, Otsego, Herkimer, Hamilton, Fulton, Montgomery, Schoharie, Madison, Chenango, Broome, and Tioga.

6th Division, Major-general, Wm. C. Brown; Syracuse, Oneida, Oswego, Cayuga, Onondaga, Cortland, and Tompkins.

7th Division, Major-general, Wm. S. Fullerton; Sparta, Wayne, Monroe, Ontario, Seneca, Yates, Steuben, Livingston, Chemung, and Schuyler.

Oriskany.—45th Regt., Colonel, Jeremiah Palmer; Lieutenant-colonel, E. W. Perkins; Major, Israel J. Gray.

Rome.—46th Regt., Colonel, Richard G. Savery; Lieutenant-col., Samuel W. Morton; Major, Spencer H. Stafford.

Pulaski.—47th Regt., Colonel, A. Z. McCarty; Lieutenant-col., G. W. Stillwell.

Oswego.—48th Regt., Colonel, Samuel R. Beardsley; Lieutenant-colonel, John W. Judson; Major, D. B. Kimball.

Auburn.—49th Regt., Colonel, James L. Jenkins; Lieutenant-colonel, Wm. H. Carpenter.

Ithaca.—50th Regt., Colonel, David E. Avery; Lieutenant-colonel, Theron Seymour; Major, Daniel K. Houtz.

Baldwinsville.—51st Regt., Colonel, Isaac T. Minard; Major, J. D. Hawley.

52d Regt., Colonel, Lyman Reynolds; Lieutenant-colonel, James A. Carmichael; Major, Judah Pierce.

Paris.—53d Regt., Colonel, J. F. L. Addington; Lieutenant-col., Alfred S. Taylor.

Rochester.—54th Regt., Colonel, H. S. Fairchild; Lieutenant-colonel, B. R. McAlpine; Major Jas. T. Griffin.

58th Regt., Colonel, E. C. Frost.

59th Regt., Colonel, James Wood, Jr.

Bath.—60th Regt., Colonel, R. B. Valkenburg; Lieutenant-colonel, Levi C. Whiting; Major, Wm. Smith.

Colesville.—61st Regt., Colonel, John B. Folsom; Lieutenant-colonel, Robert L. Stevens; Major, Augustus Frank.

Knowlesville.—62d Regt., Colonel, Peter Saxe; Lieutenant-col., R. M. Hill; Major, Thomas T. Sprague.

Cuba.—63d Regt., Colonel, J. O. Spenser; Lieutenant-colonel, Sumner Davidson; Major, Wm. Ennis.

Gowanda.—64th Regt., Colonel, Thos. J. Parker; Lieutenant-colonel, D. G. Bingham; Major, Enos C. Brooks.

Buffalo.—65th Regt., Colonel, Jacob Kretner; Lieutenant-colonel, Francis Fisher; Major, Michael Wiederich.

Lockport.—66th Regt., Colonel, Adam Brown; Lieutenant-colonel, Solomon B. Moor; Major, Peter Greiner.

East Hamburg.—67th Regt., Colonel, Chauncey Abbot; Lieutenant-colonel, H. S. Clough; Major, John A. Case.

Fredonia.—68th Regt., Colonel, David S. Forbes; Lieutenant-colonel, H. A. Pendegrast; Major, Chas. Kennedy.

New York.—69th Regt., Colonel, James R. Ryan; Major, Robert Nugent.

Brooklyn.—70th Regt., Colonel, Samuel Graham; Lieutenant-colonel, J. J. Dillon; Major, Arthur Wellwood.

New York.—71st Regt., Colonel, A. S. Vosburg; Lieutenant-col., H. P. Martin; Major, D. S. Butterfield.

Brooklyn.—72d Regt., Colonel, Edmund Powers; Major, Michael Bennet.

Stapleton.—73d Regt., Colonel, Geo. A. Osgood; Lieutenant-col., Geo. W. McClean; Major, Francis S. Jones.

Buffalo.—74th Regt., Colonel, John M. Griffith, Lieutenant-col., John H. Bliss; Major, Watson A. Fox.

New York.—75th Regt., Colonel, Michael Dehoney; Lieutenant-colonel, John H. McCann; Major, James Haggarty.

55th Regt., Colonel, H. G. Stebbins; Lieutenant-colonel, Emanuel B. Hart; Major, Eugene Le Gall.

CORRECT RETURNS OF THE MUSTER OF THE FIRST DIVISION, ON THE 4TH JULY, 1856.

FIRST BRIGADE, GENERAL SPICER.

1st Regiment, Major Hoey.

Privates,	122
Music,	15
Field, &c.,	20=157.

2d Regiment, Lieutenant-colonel Robertson.

Privates,	204
Music,	18
Field, &c.,	20=242.

3d Regiment, Colonel S. B. Postley.

Privates,	204
Music,	20
Field, &c.,	30=254.

71st Regiment.

Privates,	104
Music,	16
Field, &c.,	22=142.

SECOND BRIGADE, GENERAL C. YATES.

4th Regiment, Colonel Hincken.

Privates,	184
Field, &c.	26=210.

5th Regiment, Colonel Swartzwalder.

Privates,	340
Pioneers,	6
Music,	24
Field, &c.,	40=410.

6th Regiment, Colonel J. C. Pinckney.

Privates,	180
Music,	16
Pioneers,	6
Field, &c.,	35=237.

75th Regiment, Colonel S. J. McCann.

Privates,	132
Music,	16
Field, &c.,	24=172.

THIRD BRIGADE, GENERAL HALL.

7th Regiment, Colonel A. Duryea.

Privates,	256
En Corps,	10
Drums,	16
Band,	40
Troop,	26
Field, &c.,	50=398.

8th Regiment, Colonel Lyons.

Privates,	166
Troop,	24
" on right of Division,	52
Music,	20
Field, &c.,	40=302.

9th Regiment, Colonel Lucius Pitkin.

Privates,	188
Troop,	16
Music,	24
Grenadiers,	18
Field, &c.,	32=278.

55th Regiment, Major Le Gall.

Privates,	141
Drums,	10
Band,	20
Pioneers,	9
Field, &c.,	24=204.

FOURTH BRIGADE, COLONEL VAN BUREN, COMMANDING.

10th Regiment, Major G W. J. Smith.

Privates,	140
Music,	16
Pioneers,	6
Field, &c.,	22=184.

4th Regiment, Lieutenant-colonel Bostwick.

Privates,	195
Lancers,	24
Music,	26
Field, &c.,	29=274.

12th Regiment, Lieutenant-colonel Stearns.

Privates,	125
E. Corps,	10
Band,	20
Field, &c.,	20=175.

69th Regiment, Lieutenant-colonel Butler.

Privates,	202
E. Corps,	19
Dragoons,	17
Music,	26
Field, &c.,	30=294.

About two thirds of the division turn out generally at a parade.

A TABLE

Showing the number of days from any day in one month to the same day in another month.

(Very useful in banking business.)

From / To	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Jan.	365	31	59	90	120	151	181	212	243	273	304	334
Feb.	334	365	28	59	89	120	150	181	212	242	273	303
Mar.	306	337	365	31	61	92	122	153	184	214	245	275
Apr.	275	306	334	365	30	61	91	122	153	183	214	244
May	245	276	304	335	365	31	61	92	123	153	184	214
June	214	245	273	304	334	365	30	61	92	122	153	183
July	184	215	243	274	304	335	365	31	62	92	123	153
Aug.	153	184	212	243	273	304	334	365	31	61	92	122
Sept.	122	153	181	212	242	273	303	334	365	30	61	91
Oct.	92	123	151	182	212	243	273	304	335	365	31	61
Nov.	61	92	120	151	181	212	242	273	304	334	365	30
Dec.	31	62	90	121	151	182	212	243	274	304	335	365

Example.—How many days from the 2d of April to the 2d of September? Look for April at the left hand, and September at the the angle is 153.

REVENUE AND EXPENDITURES

OF THE UNITED STATES GOVERNMENT, FOR THE YEAR ENDING JUNE 30, 1856.

RECEIPTS.

From customs,	$59,085,238 28
From lands,	8,000,000 00
Miscellaneous sources,	833,495 98
Total receipts,	$67,918,734 26
Balance in Treasury, July 1, 1855,	18,931,976 01
	$86,850,710 27
Expenditures,	71,226,846 91
Balance in Treasury, July 1, 1856,	15,623,863 36

EXPENDITURES.

Civil List, Miscellaneous and Foreign Intercourse,	$23,769,885 10
Department of Interior,	5,331,676 11
Department of War,	13,915,634 69
Department of Navy,	15,238,323 30
Redemption of Public Debt, and interest on	10,302,009 71
Deficiency in Post-office	2,669,368 00
Total expenditures,	$71,226,846 91

UNITED STATES WEIGHTS AND MEASURES.

LENGTH.

3 barleycorns	make	1 inch,
12 inches	"	1 foot,
3 feet	"	1 yard,
5½ yards or 16½ feet	"	1 rod or pole,
40 rods or 220 yards	"	1 furlong,
8 furlongs or 1760 yards	"	1 mile,
60 geographical miles	"	1 degree.

SURVEYOR'S MEASURE.

7.92	inches	make	1 link,
100	links or 22 yards	"	1 chain,
80	chains	"	1 mile,
69.121	miles	"	1 geographical degree.

NAUTICAL MEASURE.

6 feet	make	1 fathom,
120 fathoms	"	1 cable's length,
1 nautical mile	equal to	6082.66 feet,
3 miles	"	1 league,
20 leagues	"	1 degree,
360 degrees	"	the earth's circumference.

CLOTH MEASURE.

2¼	inches	make	1 nail,
4	nails	“	1 quarter,
4	quarters	“	1 yard,
3	“	“	1 Flemish ell,
5	“	“	1 English ell,
6	“	“	1 French ell.

The standard yard for the State of New York is a brass rod, which bears to a pendulum beating seconds in *vacuo*, in Columbia College, the relation of 1,000,000 to 1,086,141, at a temperature of 32° Fahrenheit; that of the English is 62°.

COMPARATIVE MEASURE.

5,280 feet		make	1 Eng. and Am. mile,
1 mile	224 yards	“	1 Scottish (ancient) mile,
1 “	480 “	“	1 Irish “ “
3 “	1,570 “	“	1 German (short) “
5 “	1,326 “	“	1 “ (long) “
6 “	999 “	“	1 Hanoverian “
1 “	48 “	“	1 Tuscan “
4 “	1,197 “	“	1 Russian “
4 “	1,204 “	“	1 Danish “
4 “	1,435 “	“	1 Dantzic “
5 “	313 “	“	1 Hungarian “
5 “	353 “	“	1 Swiss “
6 “	1,140 “	“	1 Swedish “
1 “	380 “	“	1 Arabian “
	1,760 “	“	1 Roman (modern) “
3 miles		make	1 English league,
3 “		“	1 French “
2 “	743 yards	“	1 “ posting league,
2 “	1,115 “	“	1 Spanish judicial “
5 “	376 “	“	1 “ common “
3 “	1,480 “	“	1 Portuguese “
3 “	1,584 “	“	1 Flemish “
	1,167 “	“	1 Russian verst,
1 “	66 “	“	1 Turkish bein,
3 “	806 “	“	1 Persian parasang.

SQUARE MEASURE.

144 square inches		make	1 square foot,
9 “	feet	“	1 yard,
272¼ “	“	“	1 rod or pole,
30¼ “	yards	“	1 pole,
40 “	rods	“	1 rood,
4 “	roods	“	1 acre,
640 “	acres	“	1 mile or govt. section,
36 “	miles	“	1 govt. township.

CUBIC MEASURE.

1728	cubic inches . . .	make	1 cubic foot,
27	" feet . . .	"	1 " yard,
50	" " of round timber	"	1 ton,
40	" " of hewn "	"	1 "
40	" " of shipping "	"	1 "
16	" " of "	"	1 cord foot,
8 cord feet or 128 cubic feet		"	1 cord of wood.

LIQUID MEASURE OF THE STATE OF NEW YORK.

6.912	cubic inches	make	1 gill,
27.648	" "	"	1 pint,
55.296	" "	"	1 quart,
221.184	" "	"	1 gallon.

The wine gallon is the standard for all liquid measures, and is fixed by the Legislature at 8 lbs. of pure water at its maximum density.

WINE MEASURE.

4	gills	make	1 pint,
2	pints	"	1 quart,
4	quarts	"	1 gallon,
31½	gallons	"	1 barrel,
42	"	"	1 tierce,
63	"	"	1 hogshead,
2	hogsheads	"	1 pipe or butt,
2	pipes	"	1 tun.

DRY MEASURE.

2	pints	make	1 quart,
4	quarts	"	1 gallon,
8	"	"	1 peck,
4	pecks	"	1 bushel.

The legal bushel of America is the old Winchester measure, 18½ inches in diameter, and 8 inches deep, containing 2150.42 cubic inches. The statute bushel of the State of New York contains 2211.84 cubic inches, or 80 lbs of pure water at its maximum density. The bushel measure varies in almost every State.

TROY WEIGHT.

24	grains	make	1 pennyweight,
20	pennyweights	"	1 ounce,
20	ounces	"	1 pound.

AVOIRDUPOIS WEIGHT.

27 11-32	grains Troy	make	1 dram,
16	drams .	"	1 ounce,
16	ounces .	"	1 pound,
28	pounds .	"	1 quarter,
4	quarters .	"	1 cwt.
20	cwt. .	"	1 ton.

The standard avoirdupois pound of the State of New York is the weight of 27.7015 cubic inches of distilled water, weighed in air, at a maximum density (39° 83′), the barometer being 30 inches.

In Philadelphia and many other places, 2,240 lbs. are usually considered a ton. In the State of New York, unless by special agreement, 2,000 lbs. are a ton. Sales by the pound are most common; nothing is sold by the cwt. or 112 lbs. In avoirdupois 7. lbs. make 1 clove of wool, and 14 lbs. 1 stone. A pack of wool is 240 lbs. In Ohio, when sales are made by the bushel, without a special agreement, the following are the legal weights of a bushel: wheat, 60 lbs.; Indian corn, 56; barley, 48; oats, 39; rye, 56; flaxseed, 56; cloverseed, 64. Corn is usually sold in the western States 56 lbs. to the bushel. In Boston 53 lbs. are considered a bushel.

In freight, by the rules of the New York Chamber of Commerce, a ton is composed of 1,568 lbs. of coffee in casks, 1,830 lbs. in bags; 1,120 lbs. of cocoa in casks, 1,307 lbs. in bags; 952 lbs. pimento in casks, 1,110 in bags; 8 barrels of flour, 196 lbs. each; 6 barrels of beef, pork, tallow, pickled fish, pitch, tar, and turpentine; 2,000 lbs. of pig and bar-iron, potashes, sugar, logwood, fustic, Nicaragua wood, and all heavy dyewoods, rice, honey, copper ore, and all other heavy goods; 1,600 lbs. of coffee, cocoa, and dried codfish, in bulk, and 1,200 lbs. of dried codfish in casks of any size; 600 lbs. of ship bread in casks, 700 in bags, and 800 in bulk; 200 gallons (wine measure), reckoning the full contents of the casks, oil, wine, brandy, or any kind of liquors; 22 bushels of grain, peas, or beans, in casks; 36 bushels of grain in bulk; 36 bushels of European salt; 31 bushels West India salt; 29 bushels of sea-coal; 40 feet (cubic measure) of mahogany, square timber, oak, plank, pine, and other boards, beavers, furs, peltry, beeswax, cotton, wool, and bale goods of all kinds; 1 hogshead of tobacco, and 1,000 lbs. of dry hides; 800 lbs. of China raw silk, 1,000 of net bohea, and 800 green tea.

APOTHECARY'S WEIGHT.

20 grains	make	1 scruple,
3 scruples	"	1 dram,
8 drams	"	1 ounce,
12 ounces	"	1 pound.

All weights now used by apothecaries above grains are avoirdupois.

METALS IN THEIR ORDER OF DUCTILITY.

Wire-drawing Ductility.—Gold, silver, platinum, wrought iron, copper, zinc, tin, lead. *Laminable Ductility.*—Gold, silver, copper, tin, platinum, lead, zinc, wrought iron.

WEIGHT OF VARIOUS SUBSTANCES IN POUNDS.

Avoirdupois.—1 cubic foot of bricks weighs 124 lbs.; 1 do. of clay, 130; 1 do. of sand or loose earth, 95; 1 do. of common soil, 1 do. of cork, 15; 1 do. of clay and stones, 160; 1 do. of marble, 166; 1 do. of granite, 169; 1 do. of cast iron, 450.55; 1 do. of wrought iron, 486.65; 1 do. of steel, 489.8; 1 do. of copper, 555; 1 do. of lead, 708.75; 1 do. of brass, 537.75; 1 do. of tin, 456; 1 do. of white pine, 29.56; 1 do. of sea water, 64.3; 1 do. of fresh water, 62.5; 1 do. of air, .07529; 1 do. of steam, .03689.

Weight of 1 Bushel of wheat, 60 lbs.; 1 do. of beans or peas, 63: 1 do. of corn or rye, 56; 1 do. of hemp, 48; 1 do. of castor oil beans, or Timothy seed, 56.

Gallons.—1 gallon of oil weighs 7.45 lbs.; 1 do. of water, 8.00; 1 do. of proof spirits, 7.40; 1 do. of vinegar, 8.64.

FOREIGN WEIGHTS AND MEASURES

REDUCED TO THE STANDARD OF THE UNITED STATES.

(The two right-hand figures are the hundredth parts of a whole number.)

FRANCE.

Metre	3·28 feet.
Decimetre (1-10th metre)	3·94 inch.
Velt	2·00 galls.
Hectolitre	26·42 galls.
Decalitre	2·64 galls.
Litre	2·11 pints.
Kilolitre	35·32 feet.
Hectolitre	2·84 bush.
Decalitre	9·08 qrts.
Millier	22·05 lbs.
Quintal	220·54 lbs.
Kilogramme	2·21 lbs.

AMSTERDAM.

100 lbs. 1 centner	108·93 lbs.
Last of grain	85·25 bush.
Ahm of wine	41·00 galls.
Amsterdam foot	0·93 foot.
Antwerp foot	0·94 foot.
Rhineland foot	1·03 feet.
Amsterdam ell	2·26 feet.
Ell of the Hague	2·28 feet.
Ell of the Brabant	2·30 feet.

NETHERLANDS.

Ell	3·28 feet.
Mudde of Zak	2·84 bush.
Vat hectolitre	26·42 galls.
Kan litre	2·11 pints.
Pond kilogramme	2·21 lbs.

HAMBURG.

Last of grain	89·64 bush.
Ahm of wine	38·25 galls.
Hamburg foot	0·96 foot.
Ell	1·92 feet.

PRUSSIA.

100 lbs. of 2 Cologne marks each	103·11 lbs.
Quintal, 110 lbs	113·42 lbs.
Sheffel of grain	1·56 bush.
Eimar of wine	18·14 galls.
Ell of cloth	2·19 feet.
Foot	1·03 feet.

DENMARK.

100 lbs. 1 centner	110·28 lbs.
Barrel or toende of corn	3·95 bush.
Viertel of wine	2·04 galls.
Copenhagen or Rhineland foot	1·03 feet.

SWEDEN.

100 lbs. or 5 lispunds.	73·76 lbs.
Kan of corn	7·42 bush.
Last	75·00 bush.
Cann of wine	69·09 galls.
Ell of cloth	1·95 feet.

RUSSIA.

100 lbs. of 32 laths each	90·26 lbs.
Chertwort of grain	5·95 bush.
Vedro of wine	3·25 galls.
Petersburg foot	1·18 feet.
Moscow foot	1·10 feet.
Pood	36·06 lbs,

SPAIN.

Quintal or 4 arrobas	101·44 lbs.
Arroba	25·36 lbs.
Arroba of wine	4·43 galls.
Fanega of grain	1·60 bu

PORTUGAL.

100 lbs..............	101·19 lbs.
22 lbs. (1 arroba)	22·26 lbs.
4 arrobas of 22 lbs. (1 quintal)...........	89·05 lbs.
Alquiere............	4·75 bush.
Mojo of grain........	23·03 bush.
Last of salt..........	70·00 bush.
Almude of wine.....	4·37 galls.

SICILY.

Cantaro groso	192·50 lbs.
Cantaro sottile	175·00 lbs.
100 lbs..............	70·00 lbs.
Salma grossa of grain.	9·77 bush.
Salma generale......	7·85 bush.
Salma of wine	23·06 galls.

NAPLES.

Cantaro groso	196·50 lbs.
Cantaro picolo.......	106·00 lbs.
Carro of grain.......	52·24 bush.
Carro of wine.......	264·00 galls.

ROME.

Rubbio of grain.....	8·36 bush.
Barih of wine	15·31 galls.

GENOA.

100 lbs. or peso groso	76·87 lbs.
100 lbs. or peso sottile	69·89 lbs.
Mina of grain........	8·43 bush.
Mezzarola of wine...	89·22 galls.

FLORENCE AND LEGHORN.

100 lbs. or 1 cantaro..	74·86 lbs.
Moggio of grain.....	16·59 bush.
Barile of wine.......	12·04 galls.

VENICE.

100 lbs. peso groso...	105·18 lbs.
100 lbs. peso sottile..	64·04 lbs.
Moggio of grain	9·08 bush.
Anifora of wine	187·00 galls.

TRIESTE.

100 lbs..............	123·60 lbs.
Stajo of grain........	2·34 bush.
Orna or eimer of wine	14·94 galls.
Ell for woolens	2·22 feet.
Ell for silk...........	2·10 feet.

MALTA.

100 lbs. 1 cantar	174·50 lbs.
Salma of grain.......	8·22 bush.
Foot.................	0·85 foot.

SMYRNA.

100 lbs. (1 quintal)...	129·48 lbs.
Oke.................	2·83 lbs.
Quillot of grain......	1·46 bush.
Quillot of wine......	13·50 galls.

CHINA.

Tail.................	1·33 oz.
16 tails 1 catty.......	1·33 lbs.
100 catties 1 picul....	133·25 lbs.

LENGTH OF DAY AND NIGHT.

At any time of the year, add 12 hours to the time of the sun's setting, and from the sum substract the time of rising, for the *length of the day.* Substract the time of setting from 12 hours, and to the remainder add the time of sun's rising next morning, for the *length of the night.* These rules are equally true for *apparent* time.

WIND TABLE.

Showing the frequency of various winds in different countries. The numbers in each column denote the number of days of each wind in every 1000 days.

COUNTRIES.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
United States	96	116	49	108	123	197	161	210
England	82	111	99	81	111	225	171	120
France	126	140	84	76	117	192	165	110
Germany	84	98	119	87	97	185	198	131
Denmark	65	98	100	129	92	196	161	156
Sweden	102	104	80	110	128	210	159	106
Russia	99	191	81	130	98	143	166	192

NEWSPAPERS.

We are indebted for the following statistics of the newspaper press of the United States to "Lay's Newspaper Record," Although it is scarely possible for such a work to be strictly accurate, we expect it approximates near to the truth. At all events the "Record" is the latest publication on the subject.

Alabama	has	83	newspapers	of all kinds.
Arkansas	"	21	"	"
California	"	87	"	"
Connecticut	"	42	"	"
Delaware	"	9	"	"
District of Columbia	"	17	"	"
Florida	"	18	"	"
Georgia	"	63	"	"
Illinois	"	221	"	"
Indiana	"	178	"	"
Iowa	"	61	"	"
Indian Territory	"	1	"	"
Kansas Territory	"	2	"	"
Kentucky	"	101	"	"
Louisiana	"	85	"	"
Maine	"	65	"	"
Maryland	"	61	"	"
Massachusetts	"	225	"	"
Michigan	"	98	"	"
Minnesota	"	20	"	"
Mississippi	"	70	"	"
Missouri	"	103	"	"
Nebraska Territory	"	4	"	"
New Hampshire	"	43	"	"
New Jersey	"	78	"	"
New York	"	613	"	"
North Carolina	"	85	"	"
Ohio	"	393	"	"
Oregon Territory	"	8	"	"
Pennsylvania	"	418	"	"
Rhode Island	"	20	"	"
South Carolina	"	53	"	"
Tennessee	"	92	"	"
Texas	"	56	"	"
Utah	"	1	"	"
Vermont	"	32	"	"
Virginia	"	138	"	"
Washington Ter.	"	2	"	"
Wisconsin	"	87	"	"
Total		3,754		

A TABLE

By which to ascertain the Number of Bricks necessary to construct any piece of building, from a four-inch wall to twenty-four inches in thickness.

Superficial feet of wall.	Number of Bricks to Thickness of 4-inch.	8-inch.	12-inch.	16-inch.	20-inch.	24-inch.
1	8	15	23	30	38	45
2	15	30	45	60	75	90
3	23	45	68	90	113	135
4	30	60	90	120	150	180
5	38	75	113	150	188	225
6	45	90	135	180	225	270
7	53	105	158	210	263	315
8	60	120	180	240	300	360
9	68	135	203	270	338	405
10	75	150	225	300	375	450
20	150	300	450	600	750	900
30	225	450	675	900	1,125	1,350
40	300	600	900	1,200	1,500	1,800
50	375	750	1,125	1,500	1,875	2,250
60	450	900	1,350	1,800	2,250	2,700
70	525	1,050	1,575	2,100	2,625	3,150
80	600	1,200	1,800	2,400	3,000	3,600
90	675	1,350	2,025	2,700	3,375	4,050
100	750	1,500	2,250	3,000	3,750	4,500
200	1,500	3,000	4,500	6,000	7,500	9,000
300	2,250	4,500	6,750	9,000	11,250	13,500
400	3,000	6,000	9,000	12,000	15,000	18,000
500	3,750	7,500	11,250	15,000	18,750	22,500
600	4,500	9,000	13,500	18,000	22,500	27,000
700	5,250	10,500	15,750	21,000	26,250	31,500
800	6,000	12,000	18,000	24,000	30,000	36,000
900	6,750	13,500	20,250	27,000	33,750	40,500
1,000	7,500	15,000	22,500	30,000	37,500	45,000

NOTE.—7½ bricks equal one superficial foot. Bricks vary in size—7½ bricks to a superficial foot is about the average. Allowance must also, in some cases, be made for mortar.

GREAT DEPTH OF THE OCEAN.

The following account of the depth at which the ocean has been sounded, will give some idea of the vast valleys that exist in its bed. The sounding was performed in the Atlantic, and the depth at which bottom was reached was 7,706 fathoms, or 15,412 yards, being over *eight miles*. The time required for this immense length line to run out was about nine hours and a half!

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